Local Government
Management Project

Series B Publications
Technical Papers

Improving
Management
Performance:

The Role of
Management Information

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3

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Preface

This paper on the development of systematic approaches to the effective handling and use of information was a difficult one to write. It was necessary, however, because the Local Government Management Project (LGMP) had indicated the crucial role of information in management and the Project staff felt that they had been able to identify some major weaknesses of past information improvement initiatives.

The LGMP is a four year experiment in management improvement in local government, financed by the Province of Ontario and the Ontario municipalities of London, Ottawa, St. Catharines, and the Regional Municipality of Niagara. The Project was designed and implemented by a Project Team from Queen's University, working in conjunction with internal management advisors, known as Project Leaders, and other municipal administrators. The Queen's Project Team was also responsible for documenting the Project experience and for attempting to evaluate the outcome.

The events and experiences which occurred as the four municipalities applied new management practices to their operations, have been documented in detail. Lessons from those experiences have also been extracted and extensively documented and evaluated. Papers containing the history and evaluation are published under the general heading of 'Series A Publications: Documentation and Evaluation'.

During the Project it became apparent that certain factors influenced the effectiveness of local government management to an inordinate extent. These included the problem of establishing direction to guide the efforts of municipal administrators and councillors, the ability to measure managerial performance, the ability of a municipality to adapt to environmental and organizational changes, and the extent to which a municipality was able to develop and effectively use information. Special papers were written in each of these areas, directed to alert and able municipal administrators and councillors, because the existing consulting guidance was insufficient and previous efforts at management improvement were judged by the LGMP staff to be inadequate and somewhat misdirected.

The series of four publications which dealt with these important factors is called 'Series B Publications: Technical Papers', and includes, in addition to this paper:

1 *Improving Management Performance: The Contribution of Productivity and Performance Measurement;*

2 *Corporate Management: Its Role in Local Government;*

3 *Management Improvement: A Manager's Guide to the Theory and Process of Individual and Organizational Change.*

The LGMP staff consider that the most important sources and types of management information are ignored in most information improvement projects, and that formal information systems are almost never designed to meet managers' needs. Thus this paper, which discusses systematic approaches to information in local government, attempts to provide managers with a different perspective on the handling and use of information. It really ends where most attempts to develop information systems begin. Management information is defined in very broad terms and the connection between effective management and appropriate management information is seen as crucial.

It is quite possible that local government managers, both elected and appointed, will not react with immediate favour to the content of this paper. It is suggested, however, that they give it some serious consideration if they are really interested in improving local government management. Involvement and action by managers at all levels is regarded as a primary step toward information improvement and a suggested method of managerial involvement in the process is included in this paper.

Moreover, the LGMP experience indicated that genuine management involvement in, and support for, any management change or improvement program is very important. Managers themselves must initiate and work on changes in their own management behaviour. Management advisors can help, but only the individuals involved can really make the desired changes in on-the-job behaviour. Unless managers are prepared to make the effort and spend the time in order to improve their effectiveness, most management and organizational development initiatives will fail.

This paper originally contained a good deal of theory and examples of other attempts to improve information handling. Much of that content was dropped in favour of a pragmatic, easy to follow, non theoretical paper which describes a process of information improvement and nothing more.

Project experiences from all four municipalities contributed to the conclusions in this paper but probably the most important contributors were St. Catharines and the Region of Niagara. Tony Tersigni from the Project Team and Gene Deszca and Bob Rippey, the municipal Project Leaders, provided support and advice and took the initiative in introducing the management improvement processes which led to increased understanding of managerial information needs.

Table of Contents

Executive Summary

This paper on the handling and use of information emphasises several factors which were found to have a major impact upon the success of information improvement programs. These include:

1 the relationship between management sophistication and the information available to managers;

2 the importance to effective management of the information networks established by individual managers within the organization;

3 the need for extremely careful and detailed preparation for any major information improvement initiative; and

4 the need for the involvement of most, if not all, of the managers in the municipality in the program.

The LGMP staff firmly believe that previous attempts to improve information technology have not dealt with these areas adequately and an attempt is made to indicate some concepts and activities which might be incorporated in subsequent information improvement programs.

THE IMPACT OF MANAGEMENT SYSTEMS UPON INFORMATION

There is a primary need for an understanding of the relationship between management processes and information. Operational administrators, for example, are dependent upon their council and top administrators for clear direction in the form of the purpose of municipal government, its roles, particularly in service delivery, and its goals and broad objectives. Oddly enough, these fundamental bases for subsequent levels of management are customarily ignored in attempts to improve management information. When such information is lacking, however, productive efforts become disconnected within an organization. People may even be doing the wrong thing very efficiently, although the LGMP experience indicates that when confusion regarding goals and objectives is rampant very little of anything except frenetic, cosmetic activity takes place.

The LGMP experience also indicates that the broad, all inclusive blanket of goals and objectives envisaged by both management by objectives and planned programmed budgeting is probably unrealistic, and that the establishment of such goals and objectives might consume more time than they are worth. On the other hand, clear definition of the purpose of every management component of an organization is crucial, and roles relative to clients and other segments of the organization need to be clearly defined. It is also important to establish the ongoing functions of management necessary to achieve the organization's purpose at each management level.

Whether these are called goals, key result areas, or functions is probably not important as long as they include the major things a manager, as opposed to a technical expert, must do. These include selecting, training and developing, motivating and rewarding, and all of the other things which an effective manager must do to achieve high productivity.

Finally, it is important for each manager to develop some objectives to deal with problem areas or potential problem areas in his organization. Before he can set such objectives, however, he needs to be thoroughly aware what problems actually exist. To attain this awareness he needs to involve his sub-managers or employees in a process of problem identification. Managers seem to consistently lack information regarding the actual problems present within their areas of responsibility and problem identification workshops involving those people reporting to a manager are a crucial aspect of effective management.

While municipal councillors do not directly fill line management roles, the council itself is really the top level of municipal management. Unless the council is able to clarify the purpose of local government, the roles which council and administrators are expected to play, and to establish goals and broad objectives for administrative guidance, municipal operations will necessarily be both ineffective and inefficient. Council as a whole needs to be involved in ongoing problem identification with top administrators and specific workshops need to be scheduled for that purpose.

Effective processes of management are themselves the primary factors in supplying the most fundamental management information.

INDIVIDUAL INFORMATION NETWORKS

Table I outlines a process for determining a manager's requirement for information and the role of effective management is again emphasized. Information is meaningless unless a manager is performing an effective management role. In fact, unless a manager has thought about what he really does and needs to do in some detail, he is largely unable to define his needs for management information or even to understand what information he is currently using and how he is using it.

Each manager operates in a unique way and, to an extent, will have exclusive requirements for information. To a large extent he develops his own information system to meet his exclusive needs and formal information systems form only a small part of his sources. Any attempt to improve information handling must take into account the individual management approaches of different managers and must make an attempt to help

each manager to obtain, use and transmit information more effectively. It is suggested in this paper that management advisors can fill an important role by working directly with individuals, committees and teams to help them to better define their management requirements and information needs.

The suggested process is somewhat time consuming for each manager involved and certainly requires a great deal of management advisory time. On the other hand, managers going through this process develop a much better appreciation of the things they are actually doing as managers. By thinking about the roles they are really playing they become conscious of changes which they should make. Once they have decided what decisions they should be making, which ones they should be delegating, and the management roles they should be playing, it is relatively easy to help them to identify their information needs.

At this point, information systems experts and management advisors can help. The management advisor can often help in identifying alternate sources of information, e.g. direct contact as opposed to letters or reports. Systems consultants can determine the demand for certain types of information and the approximate costs of supplying it to the managers who would put it to use.

When they are aware of the actual information needs of effectively operating managers, consultants can rather easily put that information into the required form and get it to managers at the appropriate time. The difficulty in the past has not revolved around the inability of data processing professionals to put information in a useful form, but rather around the understanding of what is required by the managers themselves.

To provide a better idea of the meaning of the concepts outlined in Part I and discussed in Part III, Part II contains a short example of a particular manager's examination of his own management information needs.

INITIATING A MAJOR MANAGEMENT IMPROVEMENT PROGRAM

A comprehensive information improvement program requires careful planning and preparation. The LGMP experience indicates the need for an influential administrator to assume the role of program director. Internal administrators also should be trained as facilitators so they can help data processing professionals to obtain the information they need to set up a formal system which will meet managers' needs.

The paper concludes with an outline of an overall approach to information improvement which incorporates both management processes and the development of individual information networks. The steps in the suggested information improvement process include:

1 The clear definition of municipal purpose and roles.
2 Determination of corporate goals and broad objectives.
3 Assignment of administrative responsibility.
4 Determination of administrative goals and objectives.
5 Taking inventory of current filing systems and data processing equipment.
6 Determination of information needs:
   a determining what the individual, team or committee is doing now;
   b determining what decisions are being made;
   c determining what information has been used to make decisions;
   d examining the appropriateness of decisions; and
   e determining the need for information.
7 Establishing the relationship among different managers' needs for information.
8 Designing the formal information system.

Before proceeding with the detailed content of this paper a word of caution is in order. Managers find it very hard to identify the decisions they make, or should make, the management information they use, or should use, to explain how they use information and to identify the best information source. For these reasons the strategy outlined here emphasizes the need to help managers to work toward a meaningful and workable concept of what information is, how it contributes to effective management, what it can do for them, and what they can do to improve its effectiveness as a management tool.

TABLE 1 TO EXECUTIVE SUMMARY
IMPROVING INDIVIDUAL INFORMATION NETWORKS

Step No.	Individual Manager's Action	Managerial Roles Joint Action	Management Advisor
1	Clarifying responsibility, purpose and role.	Clarifying of role and responsibility with senior manager.	Facilitating role.
2	Identifying management functions and activities actually carried out.		Helping individual managers.
3	From activities, identifying decisions made and information used.		Helping individual managers.
4	Analyzing the decisions which should be made and the information needed for those decisions.	a) Discussion of responsibilities with senior managers and peers in light of new information. b) Problem identification with subordinates.	Integrative role — identifying overlaps and contradictions.
5	Determining how best to obtain the information needed to make the necessary decisions.	a) Discussion with subordinates (team discussions) regarding type of information which they need and what aspects of that information can be obtained from within the unit. b) Discussion with senior managers, peers and clients regarding information needed and method of obtaining that formation.	Helping managers to categorize and identify information they need and potential sources. Facilitating and conflict resolution roles.
6	Improving methods of communicating information to subordinates and to other managers.	Same joint meetings as above should suffice. The development of ongoing feedback from subordinates with regard to their interpretations of directions, goals and objectives, etc., is particularly important.	As above.
7	Each manager establishes his own information network and works with methods of improving that network.	Working with systems professionals to determine what information will be supplied by formal sources and what should come from a personal network or intra-unit system.	Liaison role to ensure that the systems developer obtains a broad perspective, so he is aware of the needs of a large cross section of managers and will not set up a system which meets only limited needs.

Introduction

The Local Government Management Project was designed to help local government managers at all levels to improve management effectiveness and efficiency. Early in the Project it became apparent that the availability, handling and use of information influenced most other aspects of management and, therefore, had to be one of the primary targets for improvement.

It seemed to the Project staff, however, that 'management information' was narrowly defined and that the use of information by managers was not well understood. Efforts to improve information handling had to begin with individual managers because each manager had to learn how to obtain and use information in such a way that it fitted with, and complemented, his approach to management. At the same time, effective information handling in the municipal organization as a whole is dependent upon an understanding of the way in which various aspects of communication and data systems inter-relate with management. To a manager, the most important information he can obtain is information regarding the purpose of his job, the roles he needs to play, the expectations of his superior and the reactions of his subordinates. This does not come in the form of data sheets, reports, etc. and, therefore, it is usually ignored in programs to improve management information.

The approach to information improvement outlined here begins with the individual manager and concentrates first upon helping him to define the type of information he needs and to develop methods of obtaining that information through his own personal system. Information in this context includes everything the manager needs to make effective decisions. A broad systematic approach to management and information improvement is described which incorporates the information needs identified by individual managers at all levels of municipal government.

This publication is designed to help both councillors and administrators to develop a greater appreciation of the scope of the information which they actually use and require, and of the importance of that information to effective and efficient management. It attempts to provide them with both personal and organizational guidelines in undertaking information-handling improvement programs within their own organizations.

For those councillors and administrators who are wondering, 'Why should I read another technical discussion of information systems in local government?', you may rest assured that:

1 this is not a technical discussion about computer hardware or software or even about information in the usual context;

2 the content of this book is based upon experiences in a management improvement project which involved all the management levels of local government, including both councillors and administrators; and

3 the subject is really the role that information plays in effective and efficient management, ('information', used in this context, implies a number of fundamental requirements for effective management which are usually ignored when management information is being discussed); and

4 this paper is addressed to local government councillors and administrators, and is written in a language that should be easily understood, with examples which are readily transferable to their own experiences.

Basically, this paper is addressed to individual managers because the LGMP staff are convinced that improvements in management are largely dependent upon the involvement of all managers in the process, and upon the feeling by those managers that proposed changes are potentially beneficial. While a manager's function, the nature of the programs he supervises, and the technology involved, are important factors in determining the form, quantity and quality of the information which he needs, the LGMP staff are convinced that all of these factors can be taken into account through a process that involves helping managers at all levels to identify and obtain the information they need to make decisions. The primary emphasis of an information improvement program should be upon the improvement of management effectiveness through clear role definition, problem identification and the determination of objectives. When managers are carrying out the appropriate management roles, information can then be developed to meet a real and recognized management need.

OUTLINE OF THE PAPER

In Part I the concept of information is defined and the potential scope of management information is identified. Some detail is necessary in explaining what is meant by management information, because this paper incorporates a much wider definition than is customary, tying information development and use to management in a thorough and detailed way. To ensure that the connection between information and management is as clear as possible, a management framework is described and the general contribution of information to effective management is discussed.

Part II concentrates on the manager's role in the initial stages of the implementation of an information improvement program. Since information must meet the needs of managers it is important that managers define

7

their purpose and roles before considering their information needs. This means that managers must think first about their jobs to get a clear picture of the actual things they should do and are doing and of the decisions they make and should be making. From there, they can go on to identify the information which they need to help them to do the appropriate job and to make the necessary decisions.

Some initial considerations on the implementation of an information improvement program are discussed in Part III, in particular, the influence of motivation, the need for a program director, and an indication of the initial steps in the process.

Part IV outlines an overall strategy for the improvement of information handling based on the experience of the LGMP. This outline is not a blueprint but rather a starting point for thoughtful managers who are setting out to improve their information handling capability.

Since the discussion contained in the body of this paper is very general, Appendix I provides a more detailed discussion of potential management roles and the information managers might require to play those roles effectively. Appendix II contains an example of the initial steps which a manager might take in defining his information needs. Appendix III provides an overview of the Project Publications.

Part I

A Perspective on Management Information

As indicated in the introduction, this paper takes a unique approach to the subject of management information. To set the stage for a discussion of techniques designed to improve the handling and use of information, this part of the paper provides both a definition of 'information' and a particular perspective on the subject. First, the scope and nature of management information, as it is used in this paper, will be identified. This is accomplished by outlining a framework that is intended to portray the broad role that information plays in management.

Managers encounter a number of problems in developing and using information effectively. A knowledge of these managerial 'road blocks' to information improvement programs is helpful to anyone contemplating the implementation of such a program, and the major ones encountered by the LGMP are identified.

THE NATURE AND SCOPE OF INFORMATION

For the purposes of this paper, information can be broadly defined as follows.

> Anything that influences a manager or managers in making a decision or in taking or not taking action can be regarded as management information.

What constitutes information for a particular manager depends almost entirely upon his attitudes, feelings and perceptions and his capacity to sense and to interpret the meaning of things which happen in his environment.

Information can affect a manager's feeling of security and his general orientation, influencing attitudes, confidence and his ability to do the job. In particular, information is a potential resource to managers in decision-making; essentially reducing their uncertainty with regard to the most appropriate course of action. To be useful, information must reach the manager in a meaningful form. Thus the content, purpose, flow and interpretation of information are all important factors and this must be recognized in any systematic attempt to improve its effectiveness, either by an individual or by an organization.

Information, therefore, covers a broad spectrum, from interpreted accounting data, to statements of organization or individual purpose, to nonverbal interpersonal messages. Information is everywhere. The actual messages a manager has selected for use and which have influenced his judgement are often very hard to identify, even for the individual concerned. This is the reason why simply asking a manager what information he has used or what information he needs for future decisions is largely a waste of time. For example, how much a manager, scheduling work for his sub-staff, is affected by his superior's goals, including his superior's attitude to the importance of meeting operational objectives, how much he trusts the information he has on projected costs, how much time he feels is wasted on routine jobs, how realistic he feels the expectations for service levels and efficiency are, how he relates to his foremen, or how happy he feels senior management is with the job he is doing, will all affect the decisions he makes. In other words, there are countless bits of information impinging on every decision-maker, and it is hard to be sure to what degree each particular item influences the decisions he makes.

At this point it is extremely important that the difference between information and data is understood and also the difference between the meaning of information to the sender as opposed to the receiver. As a basis for this discussion, consider the problem of establishing objectives throughout an organization.

Suppose that top management establishes some broad objectives for the organization. These broad objectives must be accomplished through the efforts of a large number of managers at lower levels in the organization who need to set sub-objectives or, at times, need to assume a certain number of top-management objectives as their own. These top-management objectives have certain meanings to the managers who establish them. Depending upon how they are worded and transmitted, and upon the perceptions and feelings of junior managers, they may have quite different meanings at other levels. Top-management objectives are one form of data for lower level managers. Their informational content depends upon the way in which they are interpreted by those lower level managers.

There are two factors of immense importance to management included here. The first is the need for directional data from higher levels, at each level in a management hierarchy. The second is the requirement that the data be interpreted in a similar way by both the senders (higher-level managers) and the receivers (lower-level managers).

To a large extent, therefore, upper levels of management influence the information which a manager receives, his perceptions of the decisions he can make, and his freedom to pass that information on to others in the organization. For instance, in the example described above, upper levels of management can:

1 clearly define their objectives so that the sub-manager has direction;

2 clearly indicate their priorities and expectations;

3 develop an atmosphere of trust leading to co-

operation and co-ordination in the organization so the data the sub-manager receives on cost estimates, performance, and reactions of superiors is accurate and is perceived as useful, helpful information;

4 recognize that the sub-manager must in turn define his own goals and objectives, using upper-level objectives as a source of information. Otherwise he is unlikely to understand, let alone adopt, higher-level objectives. The question is not purely one of motivation and commitment through setting one's own objectives, but it is also one of understanding and communication which can only be truly achieved by involvement at each level of management;

5 provide advice and training to the sub-managers in delegation, interpersonal communication and general management and, most important, set an example in those areas, otherwise the personal objective setting emphasized in paragraph '4' will not be effective.

Perhaps the best way to indicate the scope of management information and to emphasize its importance to the processes of management is to illustrate the role of information within a management framework.

A MANAGEMENT FRAMEWORK AND THE ROLE OF INFORMATION

Certain management functions are required in any effective organization. By and large, most management activities, however confusing, apparently illogical and hard to categorize as they may be, contribute in some way to the fulfillment of these functions[1] which are:

1 the definition of the clear, well understood and communicable purpose of an organization and its sub-organizations (the reasons why each of them exist);

2 the identification of both the general goals and specific objective activities that an organization, its sub-organizations and its individual managers, must carry out to achieve that purpose;

3 the development of structures, procedures and manpower allocations that will result in appropriate patterns of interaction and processes of management, to achieve goals and objectives at each managerial level;

4 the obtaining of the necessary human, material and financial resources;

5 the development of an ongoing adaptive management operation involving monitoring, controlling and continuous feedback with regard both to events occurring in the external environment, where there is relatively less control, and within the organization;

6 the development of a periodic, detailed, evaluative procedure for ensuring that the purpose of the or-

ganization is being fulfilled and that its goals and objectives are being achieved, including both ongoing and periodic reviews of the organization's purpose and the modification and re-establishment of goals and objectives.

The successful performance of each management function, in the local government context, is dependent upon the development of an information base and effective techniques of information handling. A discussion of the role of information in each management function follows.

1 The development of a clear understanding of the purpose of an organization and of all its elements

Unless the top managers (councillors and administrators) are able to develop and make explicit a clear understanding of the purpose of local government, managers at lower levels will lack the most fundamental information they need for management. Such information, clearly understood, can and must be translated into the purposes and required roles of the various sub-units of local government, and of individual managers. Simple and incontestible as that sounds, the LGMP experience has indicated that major areas of confusion exist, with regard to purpose and roles[2] in local government at both the council and administrative levels and, therefore, necessarily throughout the administration. At the council level, the primary political role of local government is often not clearly defined or understood by councillors, there is little real consensus with regard to what constitutes executive versus administrative policy, and there is almost consistent confusion with regard to administrative responsibilities and prerogatives in the effective operation of local government services.

Directional information of this type is fundamental to effective administration. It is frequently missing or inadequate in local government but, interestingly enough, in most discussions of management information, this primary problem area is totally disregarded. It is not even considered to be within the scope of what is usually regarded as management information. The LGMP staff contend that efforts to improve information handling and to improve the contribution of information to effective management must begin with a basic understanding of purpose by each manager in an organization. If top management, in this case council, is unable or unwilling to provide that needed definition, confusion and misdirection can be expected at other management levels.

Before leaving this aspect of management, it is important to note the initial role played in providing directional information for lower levels, by each successively higher level of management. Not only must this analysis of informational requirements and efforts at management improvement be concerned with the information various managers need, but it must also be concerned with the information that those managers, in turn, provide to subordinates, peers and superior managers within the organization.

Fundamental to an understanding of purpose and to the establishment of general and specific direction for the operation of local government, is information from higher levels of government that defines the scope of local government responsibility. Information is also needed from the public, with regard to needs for com-

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1 One of the reasons why observers have been puzzled by the things managers do (e.g. Henry Mintzberg, 'What is a Manager's Job?' *Harvard Business Review,* July-August 1975), is the attempt which has been made to categorize management roles on the basis of definable activities rather than on the basis of the purpose of those activities from the manager's viewpoint. While this point is important it involves a highly theoretical discussion which is better included in a short appendix (Appendix I) to this pragmatically oriented paper.

2 See *The LGMP Experience: Phase* II, Part II, Section A for a detailed discussion of roles and role confusion in local government.

munity decision-making, conflict resolution and municipal services. These informational requirements are discussed in some detail in Part III of this paper, but it seems most important at this time to emphasize the particular problems that are evident in local government with regard to unclear specifications of the boundaries of its jurisdiction.

Local government is carrying out functions that fall within the Provincial Government's area of responsibility and is highly dependent upon the Provincial Government for financial support. Without clear definition of its responsibility, certain important issues tend to fall in a political 'no man's land' and the public is left without a government capable of taking a clear course of action to resolve some of its more important problems. One of these is the need for one level of government to perform a watch-dog role on the total taxation burden to which citizens are subjected.

2 The identification of general goals and specific objectives

Once purposes and required roles[3] are clear, management's next task is to identify the general categories of ongoing management activity in which results must be achieved if the operation is to be successful and if the organization is to achieve its purposes. These, at the council level of local government, might include the provision of serviced land for industrial and commercial development, the provision of residential land, or housing where appropriate, the provision of recreational facilities and programs, etc. Also included in these general management areas would be such aspects as ongoing liaison with other governments, the obtaining of sufficient resources and the balancing of resources and community services. General outlining of goals and specific targets in these service areas requires the obtaining of information from citizens regarding the degree of service required and the willingness to devote resources to the development of those services. Before citizens can supply such information they, in turn, need to know the alternatives for the expenditure of local government funds and the short and long range consequences of particular spending patterns.

Information regarding goals and broad objectives of higher levels of management is required at each subsequent lower level within the organization. It is not enough for local government employees merely to know the goals and broad objectives of the next highest management level, because municipal managers and employees well down the administrative hierarchy may well be viewed as representing the whole local government organization in their dealings with the public. Knowledge of higher level goals and broad objectives is not only necessary for that reason, but is also needed by managers at lower levels so that they can establish an appropriate direction for their own efforts. By establishing their own goals and broad objectives and by confirming the appropriateness of those goals and objectives with higher management levels, local government managers are essentially supplying themselves with information that is crucial to their own operations. Unless this direction setting becomes a conscious process, it is unlikely that it will take place in an effective manner, and confusion and inefficiency will result.

One very important point must be made and emphasized. Goals, as statements of general direction of management efforts, and objectives, as broad targets, should be established and used as general guidelines by every manager. They indicate to managers at higher levels what the beliefs of lower-level managers are, regarding the areas in which they should be achieving results and the priorities the lower-level managers feel that they, personally, should pursue. They are statements of intention from lower-level managers and if the beliefs of those managers are in error they can be corrected. *For each manager, his own goals and objectives should act as dynamic (changeable with circumstance) sources of direction. To provide a properly dynamic frame of reference and to limit time spent on administration, goals need to be general statements of direction while objectives should indicate specific newly determined targets.* Objectives only need to be stated where new targets are being established or where specific changes in targets are necessary. Laundry lists of detailed and routine objectives take unnecessary time to complete, and can result in inflexibility and self-imposed constraints, instead of contributing to increased managerial flexibility in adapting to change.

To establish goals and objectives, information is needed on the expectations of clients, which include the public, higher level of management or other members or units of the local government organization. Managers are unable to establish direction effectively unless they find some way of obtaining the necessary information from clients or their representatives (council in the case of the public).

3 The development of structures and procedures

When clear information is available on roles, goals, and objectives at each management level, these serve as the rudimentary requirements for job analysis and the establishment of organizational structures and procedures. Where such directional information does not exist, however, no amount of restructuring will serve to correct organizational problems. Organizations that indulge in frequent restructuring are either organizations which have rapidly changing roles and need to restructure as a result, or, more likely, are organizations that have not adequately defined their purpose, roles, goals and objectives and are restructuring in a misdirected effort to resolve confusion.

In addition to the requirement for directional information, managers also need information from the people within their organizations, information from other organizations and organizational units with which they have routine interactions, information from clients and, finally, information pertaining to individual, unit and program performance. This information is needed in order to adequately determine the most appropriate structures and to establish the most economical and effective procedures for co-operation and co-ordination. Problem identification, feedback, review and planning discussions with peers, with subordinates, with support staff and, where possible with clients, are

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3   The expression 'required roles' is used to indicate the things managers need to do to achieve their purposes. The actual roles played by managers are, of course, rich and highly individualistic but they must result in the fulfillment of a certain number of required roles if the manager's efforts are to be effective.

media for obtaining this very important information. Formal structures may never be fully representative of the informal patterns of interaction which emerge and formal procedures may never exactly define the processes for co-operation and co-ordination which occur. When, however, the discrepancy between the formal organization (the way it is expected to operate) and the informal organization (the way it actually operates) is too great or is not recognized, the organization is out of control and attempts at change and improvement may be based on an inadequate understanding of the situation that currently exists.

To obtain effective feedback from subordinates at each management level, regarding the actual state of current operations, a high level of trust and mutual respect is necessary. The LGMP experience indicated:

a that senior managers were often not aware of operational problem areas at the next lowest management level; and

b that lower-level managers seldom had sufficient trust in higher-level managers to be open and explicit in identifying problem areas.

Subordinates need accurate information regarding the purpose, goals and broad objectives of their organization and organizational sub-unit before they can perform effectively. At the same time, they will not (and frequently cannot) contribute accurate information regarding organizational problems and potential solutions to higher levels of management unless they are involved in joint problem identification with the higher level managers.

The ability to obtain clear, objective client feedback is somewhat dependent upon both technology and the nature of the client. Engineers, for example, need rather different performance feedback information than planners who, in turn, need different information than do financial managers. Managers operating a support or advisory service, such as a transportation pool, a personnel service, a central purchasing service or a computer information service, need feedback and joint discussions with clients within the organization, whereas managers supplying a service to the public need feedback from the public regarding reactions to that service.

Some areas of service, such as police, water, or roads are easier to measure than others, such as social services, homes for the aged, and land use planning. Output measures are appropriate for some services, whereas the effectiveness of others can best be estimated through the existence of certain required processes.[4]

The improvement of management procedures and support services requires input from both parties involved so that the needs of both suppliers and users are considered.[5] Without information from these sources,

management improvement is difficult because neither users nor suppliers are aware of the other's problems and frequently have not even effectively defined their own objectives relating to the procedure in question.

Where restructuring or reorganization are considered as a potential means of management improvement, purpose, goals and objectives must be clear before restructuring begins. Members of the organization concerned should be involved in developing the rationale for the new structure, primarily so they become aware of their potential new roles within that structure, but also because they may have valuable input to the relative allocation of responsibilities and they will be more committed to the new roles if they have played a part in establishing them.

4 Obtaining and allocating the necessary human, material and financial resources

The clear definition of managerial roles, discussed in the previous section, has a major influence on the relative contributions of line and staff managers to resource management. If staff departments are given responsibility for control, e.g. Personnel for human resources, or Finance for financial resources, then those staff departments will need extensive and detailed control and monitoring processes. If, on the other hand, resource allocation responsibility is given to line managers (the LGMP staff feel strongly that this should be the case), then those managers will need to establish their own control and monitoring systems. The budgetary system, the financial management and human resources management information systems, and material and plant space inventory systems should be established so that they serve the management needs of line managers. Budgets, ideally, flow from the managers to whom responsibility has been allocated, and who subsequently allocate responsibility and resources to the next level on a priority basis.

At the same time upper levels of management need updated information on projected costs for different levels of service and alternatives, where they exist, for the type of service being delivered. Once that information is received they are better able to identify and indicate priorities. Rough costs can be determined and resources allocated to programs. Some programs or parts of programs will be firm, some will be questionable until budgeting is finalized, and some will be definitely rejected for the current year.

Managers with a knowledge of the priorities of programs, can then, and only then, use the budget as a planning tool and can set objectives to improve performance.

Managers need continuous updating and access to external sources of information with regard to methods of operation and new equipment and techniques that have been developed. Unless there is an expectation on the part of higher levels of management that managers will maintain currency in these areas, this type of information may not be obtained. Measures of relative efficiency, such as those incorporated by the Municipal Maintenance Management System[6] are useful in this regard, although conditions may differ considerably between municipalities. Unquestionably, relative measures are the most useful indicators, whereas standards, set with understanding and co-operation bet-

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4   The LGMP publication *Improving Management Performance: The Contribution of Productivity and Performance Measurement* goes into some detail of potential methods of measurement and also supplies a number of examples of such measures.

5   The LGMP publication *The LGMP Experience: Guidelines for Organizational Change in Local Government,* papers 11 and 18, discusses some techniques for improving management in these areas.

6   A system designed to assist the managers of public works services generated by the Ministry of Transportation and Communication of the Province of Ontario, Queen's Park, Toronto.

ween managers and employees, also have a good deal of potential for measuring performance. Arbitrary or imposed standards, however, can endanger co-operation and trust.

Another valuable information source is to trace the career progress of the people within an organization. The information thus obtained can assist in the development of better selection methods. Training requirements and perceived needs should also be monitored, particularly in an organization undergoing change, and individual preferences for personal development should be obtained. Appraisal, compensation, and other reward systems need to be reviewed from time to time, once again offering line and support managers an opportunity for involvement in establishing what they perceive to be a fair system.

Managers who are aware of the needs of their staff can help, both to provide motivation for that staff, and to help the personnel department to place them most appropriately. The more adequate personnel departments, operating with this information, as well as with an understanding of the needs of the organization, should be able to place members of the organization in such a way that they are fulfilling their own plus the organization's needs.

5 The development of an ongoing adaptive management system

The ongoing management of an organization involves the day to day monitoring of operations and requires processes which ensure accurate feedback from supervisors, peers and subordinates as well as control mechanisms that will operate when problems occur. Goals, objectives and procedures provide the basis for management operations and feedback can largely consist of information regarding departures from expectations, although a manager also needs feedback with regard to the understanding that others have of information he has communicated.

All members of an organization can act as sensors for data on public reactions to service, or for deviations from expected internal operations. Their ability can also be developed in feeding back their interpretations of the messages they receive so that each manager knows whether or not he is communicating accurately. Higher-level managers are better able to play an information seeking role in regard to external reactions to local government services, whereas lower-level organizational members are often the first to notice internal problems. They can play a very important role in providing a higher-level manager with immediate feedback regarding their interpretations of and reactions to his instructions and their feelings about the effectiveness of the operation.

The adaptive capability of a manager or of an organization is largely contingent upon the quality and quantity of information at the management level at which a change has been made. Managers who have been involved in planning their jobs in the first place and who, therefore, understand their roles, are more likely to see the need for changes since they have better information about the job and are usually more concerned with task effectiveness. If they are involved with planning when changes are required they will be better informed about

the new required behaviour and can make the desired change more readily. Thus the general approach to management in any organization can be an influential factor in determining the amount of information managers have regarding their jobs and, in turn, in determining their adaptive capability.

Control processes are also more effective where control, in such areas as personnel requirements and financial expenditures, is a responsibility of line management. Individual, unit, and program performance measures and financial records, initiated and reported by a manager, are more likely to be accurate and valid than data obtained through a measurement system imposed by a staff department or upper-level management. The accuracy of data depends upon the perceived purpose of that data. If information is seen as a useful management tool by individual managers within the system, and if the responsibility for management improvement rests with them, the data will be more accurate. If they feel that the data they are supplying provide the basis for a type of management or financial audit and the responsibility for resource control is seen to lie with the auditors, with a staff department or with upper level management, the data will be calculated to protect the manager and his subordinates.

6 The development of an evaluative procedure for ensuring that the purpose of the organization is being fulfilled

In addition to the ongoing monitoring of management operations, effective management includes periodic evaluations which are designed to indicate:

a the extent to which organizational and sub-organizational goals and objectives have been or are being achieved;

b the appropriateness of the defined purpose of the organization and whether or not that purpose has changed during the period;

c the degree to which current goals and objectives are designed to achieve the defined purpose of the organization;

d the establishment of new goals and objectives which meet the redefined purpose of the organization and which reflect past experience; and

e an evaluation of service programs, products and other outputs, and general operating utility (efficiency and effectiveness) to determine whether or not programs and various aspects of operations are economical, should be continued, should be revised, etc.

Most of the information required for an effective evaluation will be available if the previously stated requirements of management have been fulfilled. Prior statements of purpose, goals, objectives and accurate operating and performance data, all form the basis for an effective evaluation. In addition to individual, unit and program measures of costs and effectiveness, client feedback regarding services desired in the future has an important role to play in evaluation. Clients, or their representatives, need to be involved in determining the purpose of both service and support organizations. Such definitions are probably most effectively achieved through meetings between suppliers and clients.

In local government, the public is the client and, ideally, elected members carry representative public views. With the current electoral system in Canada, election platforms are really not possible and votes do not necessarily indicate that citizens support the personal views of candidates. For this reason, referenda, public meetings to examine proposed legislation, and briefings from citizen groups, have an important informational role to play in local government. Unfortunately, these sources of information do not provide a general and comprehensive base for community goals and objectives or for an understanding of the purpose of local government. By and large, the establishment of the purpose of local government must fall to provincial-municipal liaison committees. There will be some variation, of course, depending upon municipal population. The definition of corporate municipal goals and objectives requires input from both council and administrators − council as representatives of the public, − and administrators, both as a source of information regarding public responses and attitudes in the past, and in the capacity of experts on the supplying of specialized services.

Various methods have been used to obtain more accurate and general public input to local government decisions and, particularly, to long-range community goals and objectives. These are reviewed briefly in the LGMP paper on corporate management and will not be discussed in this paper, although it should be recognized that dynamic goals and objectives at the corporate and even strategic level, form a very important part of the municipal information requirement.[7]

Unfortunately, demographic, economic, cultural, value system, technological, and resource forecasting are all relatively undeveloped and have not contributed greatly to local government planning at this point. Characteristically, local governments have either misidentified the causes of their problems, resulting in inappropriate solutions which generate additional issues, or they have attempted to solve the problems of the previous decade which have turned into new and somewhat different problems by the time they have been recognized as public issues. Examples of problems and decision errors of this type are legion and need not be outlined here.[8]

Local governments in Canada, have neither the expertise nor the money to obtain people (if indeed such people are available) who can carry out forecasting of the type required to supply a sophisticated planning information base. Only at the provincial level are sufficient monetary resources available but, to date, these have not been mobilized either in a search for, or in the development of, the type of expertise required. In the meantime, trend analysis can be helpful in the demographic and economic areas, whereas technological fore-

casts are probably not particularly difficult. The accuracy of both resource and value forecasting is questionable, however, and the first, as we have found, is confused in Canada, whereas the second is difficult in the relatively unstable cultural situation which exists in most of North America.

Regardless of the difficulties involved in obtaining accurate forecasts, however, local governments have the potential to do far more strategic and corporate planning than they do, and the amount of information which can actually be obtained from effective joint council and administrative workshops is quite startling. Unfortunately, the participants seldom realize how much they have learned and/or contributed, because inputs to corporate management have seldom been valued in the past.

Public input for short range planning can be obtained through effective publicity programs in the early stages of a program, a major problem being the ability to ask the public the appropriate questions.[9]

THE DEVELOPMENT OF AN INFORMATION BASE

From the foregoing discussion it can be concluded that the effective development and use of information is dependent upon and interwoven with effective management.

Information serves a number of general, ongoing management needs. It not only contributes to effective managerial decisions but it helps to put those decisions in both a personal and organizational perspective for the manager. It also enables managers to deal more effectively with people, both inside and outside the organization.

A large proportion of a manager's information is obtained from a system of somewhat interrelated operations. These operations, which form an information base for management, comprise the everyday flow of communication within the organization, including filing, mail and message processing systems, recording and retention systems and transmission and receiving systems. The characteristics of these systems and the way in which they operate are closely tied to management styles, including the amount of delegation, the extent of organization and planning, the degree of centralization, etc. The sophistication of management and of these supporting operations greatly affects the freedom and accuracy of communication, the level of trust and the amount of time consumed in the activities involved in information generation, transmission, reception, retrieval and processing.

Municipal government organizations usually consist of a number of relatively independent departments which have their own filing systems and methods of information handling. Frequently, diverse systems exist within, let alone among departments. Duplications in data and in information processing equipment are common and data storage is characteristically not centralized.

Taking advantage of economies of scale, communicating effectively and effective corporate management, all require common and communicable data and information bases. It is fundamental that computer storage and data processing systems throughout the municipality

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7   Briefly, corporate goals and objectives are within the control of municipal councils, whereas strategic goals and objectives are determined through a consensus of all elected and appointed bodies with legitimate authority in the relevant area.

8   An excellent account of planning and forecasting problems in local government was presented by Donald Schon in the Keynote address at the Urban Innovation Conference, York University, May, 1977.

9   The LGMP publication *Corporate Management: Its Role in Local Government* discusses some alternatives in this area in greater detail.

have common codes, that information is carefully screened before storage and that it is available for quick retrieval by a variety of municipal departments. The LGMP experience has indicated that it is in these basic areas of information handling that the simplest, most important and most economical improvements are possible and most large municipalities have the expertise necessary to implement such systems. Yet it is seemingly hard to obtain the joint consensus and effort necessary among municipal departments to promote these advances.

Since all of the factors mentioned here will influence the strategies to be employed in efforts to improve management and information handling, they will be discussed in more detail in Parts II and III of this paper. They are mentioned at this time, only to indicate further the involved relationship between management sophistication and style and the type of information which is needed and used by managers within the organization. The development of comprehensive new information systems is of little avail unless managers are operating in such a way as to require and use the information contained in the new system.

The LGMP staff are convinced that information improvement and the development of systematic approaches to information must be approached through individual managers within the organization to a large extent. The formal information systems developed must fit with the managerial style and the information requirements of managers. These can, of course, be changed through broad and comprehensive management education and development programs. It is important for information systems developers to understand, however, that the managerial changes must take place before the requirement for the new forms and types of information can be determined.

In accepting the close relationship between information system development and management style and effectiveness, it is important to recognize that this relationship is not necessarily understood or even considered in most organizations that attempt to improve their information systems. Much lip service is given to the behavioural problems, such as 'resistance to change,' which must be considered in introducing new methods of information handling or management. What is not realized or understood is the fact that managers are frequently not resisting change, it is just that the new systems do not meet their needs or suit their management styles. Part of the solution is probably to help the managers to change their management methods and styles to become more effective managers and then to examine their information needs. Another alternative is merely to adapt the system to meet the existing needs of the more effective managers.

Before discussing a method of determining the information needs of managers it might be worthwhile to examine some of the reasons why managers have so much trouble with information handling.

MANAGERIAL PROBLEM AREAS IN INFORMATION HANDLING

There are a number of factors which seem to create difficulties for those attempting to improve information handling. These include the following.[10]

1 Managers tend to ask for all the data that they can get and then become thoroughly confused when they find themselves submerged in great quantities of largely irrelevant facts. Too much information can be as bad, or worse, than insufficient information.

2 Managers do not take the effort to define and understand the actual decisions that they make and to identify the information used to make them (both of these are extremely difficult operations for a manager).

3 The formal information system (i.e. the way information is passed on 'officially') may not be working very well. Information from formal sources may be too late, inaccurate, too detailed or not in an understandable form. The reasons for these problems may be technical (and therefore relatively easy to solve) or traditional (the results of a static, unchanging system in a dynamic, changing organization).

4 Managers may be expecting to get information from formal sources that is better obtained informally. (For example, a manager may look only to his subordinates' regular reports for feedback on how well he is communicating with them. Reliance on formal sources for this kind of personal information may lead to a manager missing important verbal or silent messages).

5 Related to '4' is the general neglect of managers to obtain confirmation that the information they send to others, often in the form of directions to subordinates, has been received and accurately interpreted. When misinterpretations have occurred in the messages received, actions will often not be according to plan and a chain of confused and garbled communications and subsequent actions can result.

6 When managers fail to delegate authority they also tend to monopolize sources of information. Both of these are common problems in local government and can lead to rigid and narrow channels of communication and confusion as a result of work and information overload.

7 Most local government departments developed fairly independently of one another, and their mutual interdependence is relatively recent. Quite often, formal procedures for handling information reflect this tradition of separate departments more than present needs. As a result, sharing and co-ordinating information is very difficult, especially when rivalry or distrust also acts to block informal communication.

8 Particularly at the council level, there appears to be a lack of realization and understanding of the administrative time consumed (and therefore cost) in supplying information requested, often by only one councillor. When such information is necessary for decision making it should be supplied, of course, although councillors should be made aware of the costs involved. When such a request for information is for purely personal political purposes or the information falls in the 'nice to know' category it is crucial that councillors are made fully aware of the attendant

10 Examples are included in Parts II and III of this paper, where the implementation of an information handling improvement program is discussed. For the sake of brevity examples have not been included in this section.

time costs. A common problem in local government results from a combination of the misunderstanding mentioned here and the failure to communicate clearly, as discussed in '5' above. Councillors often ask administrators questions, for instance, about service problems being experienced by a member of the public, and the administrator, in his anxiety, infers that the councillor wants some action taken. An overreaction can lead both to additional expenses and to subsequent conflicts if other citizens demand the same type of service.

9 One of the main problems with the use of information from informal sources is that managers are often unaware that they are using it. Many think of information in terms of formal sources only and tend to ignore the effect of informal information on their decisions and working day as a whole. It is difficult to evaluate the accuracy or value of the information under such conditions or to be aware of its impact. Thus, there is a danger in using information without realizing that it has influenced behaviour. In fact, probably much more of the information managers use comes from informal as opposed to formal sources. Ideally, formal and informal information can complement one another and can contribute to a more complete personal information network for each manager.

10 A major problem in information handling and communication in any organization is centered around a lack of trust and the resulting fear of open communication. When communication is guarded and managers protect themselves rather than confronting perceived problems openly, the available information is generally inaccurate. Managers quickly learn to distrust some sources of information and tend to make decisions which protect themselves and their staff rather than those which necessarily help in achieving the purpose of the organization.

Having quite thoroughly examined the relationship between information and management and the problems that managers have in improving their information handling capability, the obvious question is, 'What can be done to help managers to use information more effectively?' An attempt to answer that question forms the remainder of this paper.

Part II

Improving Information — The Individual Manager's Role

The characteristics of effective management were described in Part I. In that description it was indicated that effective management processes, in themselves, supplied some of the most crucial management information to other managers and provided a base for further information, such as that required for performance and program measurement. Attempting to improve management information without first establishing an effective corporate management system may well be a waste of time and effort.

Corporate perspectives are necessary at the council level to define the purpose, role, goals and broad objectives of local government. Without goals and broad objectives to work toward, administrators lack direction. Corporate goals and objectives supply some degree of consistency and direction for administrative efforts and unless they have been determined, a local government will probably be both inefficient and ineffective.

Corporate perspectives are necessary at the administrative level to ensure co-ordination and co-operation instead of competition and duplication in the attaining of effective service delivery and administrative planning. Such fundamental informational requirements as common filing and coding systems, common data processing equipment, common storage bases, common modes and procedures for communication, and well defined procedures for recommendations, reports and approvals, depend upon a degree of corporate concensus which is lacking in most local governments.

Much of the most valuable information a manager can obtain originates through joint problem identification and planning meetings, with his immediate superior, with other managers at his own level, and with the people who report to him. These processes of effective management are fully described in other LGMP publications.[1] They are re-emphasized here because they form a basis for undertaking the following steps which are recommended in the implementation of a management improvement program.

UNDERSTANDING AND IMPROVING PERSONAL INFORMATION NETWORKS

A personal information network is exactly that; there are as many such networks within the municipality as there are people. Each manager develops his own sources of information, drawing on both formal (usually written reports, documents, minutes of meetings) and informal (usually verbal and casual) communication. Each has his own procedures for obtaining and using that information, and his own particular ways of communicating with people in his own unit and with

administrators, councillors and, in some cases, the public. The importance of personal information networks is demonstrated by the problems that newcomers to the municipality (or even to a particular position), invariably face in establishing contacts and in obtaining the information they need. It is not unknown for a newly hired manager to take a year or more simply to find out who can supply him with a particular type of information, even though this may have been part of his predecessor's personal network.

Because an individual manager's personal information network is such an important tool, and is so bound up with his style of management and how he does his job, rearrangement of the formal system alone (such as filing or coding procedures or accounting records) does not seem to have much effect on how well formal information meets the needs of managers. It is for this reason, as well as others already stated, that such changes have not had the expected effect on the quality of management. The strategy suggested here is, therefore, to begin by identifying what each manager does and how he uses his personal information network. Changes and developments in formal information systems can then be based on these existent characteristics, and will be more likely to meet a manager's practical (as opposed to theoretical) needs.

The main steps recommended to help managers to step back from, examine and begin to improve their personal information networks are listed here and then described in some detail on the following pages.

1 Identify management activities
2 Identify managerial decisions.
3 Determine the information used.
4 Decide upon appropriate management decisions and activities.
5 Determine the information required and the most appropriate source.
6 Insure that information requirements are clearly stated.
7 Improve ways of obtaining information
8 Improve information provided to others

In an attempt to make this section of the paper as meaningful as possible, the discussion under each step will be addressed directly to individual managers.

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1 *The LGMP Experience: Guidelines for Organizational Change in Local Government,* and *The LGMP Experience, Phase II: The Implementation of Organizational Change.*

1 Identify management activities

a ESTABLISH THE PURPOSE OF THE JOB

The first and possibly most important step toward ensuring that you as a manager get the information you need is to identify what you are doing and how you are using information. As any manager knows, his job is not a single task, nor is it clearly definable. His days are taken up with meetings, dealing with people, handling unforeseen crises, soothing irate citizens, checking on the performance of his unit, and whatever else is required to keep things running smoothly. All of these activities involve both using and generating various kinds of information (from cost estimates to his perceptions of the way in which the people in his unit respond to different methods of communication), and it is often difficult for the individual manager to sort out the relationship between the information he receives and the decisions he makes. This section of the paper outlines a strategy for identifying the most important aspects of a manager's job, the ones upon which you should be concentrating your efforts for management improvement.

It should be stressed that this initial part of the overall strategy for improving information should not be used or considered as a means for evaluating managerial performance or to enable someone else to prescribe what you should be doing, rather it should be approached as a method whereby you can come to understand your job better and to use this understanding to develop a clearer picture of your information needs.

By looking at your work in terms of what you are trying to accomplish, you are better able to see what aspects of the task are most important, which of your activities could be delegated (thus relieving management overload), and where there is confusion with regard to your responsibilities and authority.

Before you can really establish your informational needs or look at your job in perspective, authority and responsibility relationships need to be clarified. Usually, during the process of clarification, you should try to delegate as much authority as possible and assign responsibility to lower levels, so decisions can be made as close as possible to the level where the action is taking place.

2 Managers can establish better definitions of their jobs through setting goals and objectives. This process, described in *The LGMP Experience: Guidelines for Organizational Change in Local Government*, should, ideally, be adopted prior to an attempt to improve management information.

3 Before you take the rather customary negative managerial response to the keeping of a record or diary, we suggest that you read this section of the paper. We are convinced that managers must personally become involved in improving the way they do their jobs and that they must begin with a better understanding of the things they are doing, should be doing, and the information they use. There is an alternative to the keeping of a record, but it depends upon a good deal of thoughtful consideration of the concepts discussed in the following pages and its success is highly dependent upon recall of the things you have done over a period of several weeks in some detail. Effective recall is dependent upon prior categorization of information. You will miss a large amount of significant data if you try to follow the processes described here without keeping a record of the things you do, but if you read this material and then manage for a while, you may find that the concepts help you to remember what happened and to improve your information handling capability.

Where goal and objective setting form part of a management improvement program, or where managers are already using goals and objectives, they provide a framework which should help the manager to understand his job more completely.[2] With or without explicit goals and objectives, however, the following processes should be useful.

b KEEP A RECORD OF ACTIVITIES[3]

A useful way of determining how you spend your time is to keep a diary or record of the things you do for a number of weeks (we suggest three). Many managers already use some form of appointment book or limited work record on a regular basis and this exercise would require little extra time and effort. Such records are private, of course, and are intended to provide information only to the manager himself about the things he does. In case you feel that this type of record keeping is time consuming, compare the extra time spent with training courses or with other potential management improvement programs. Remember, this is *your* method of management you are dealing with here and what you learn and the conclusions you come to definitely will apply to you.

Some specific guidelines for record keeping include the following.

i Develop a code

Develop a shorthand or code to represent different activities. You can use three or four pages in a notebook to record this code which will save you a good deal of time in recording activities.

ii Record activities

For the first week just record your different activities on the job and related to the job. This means you will be recording anything that takes place, that might potentially influence decisions at work including, of course, the decisions themselves. Record everything at work, whether it involves chatting with acquaintances (often one of the most frequent and important sources of information), returning phone calls, attending meetings, talking to subordinates, scanning professional journals, preparing or presenting reports, attending meetings or whatever, possibly using some abbreviations, e.g. under discussions with other managers, 'Half-hour discussion with Dick J. about the need for an appraisal system — he agrees we need one to reflect performance'.

iii Keep continuous records

You will need to keep your notebook with you so you can record ongoing activities, travel time and so on. Some of the most important discussions you have during the day may take place over coffee, so do not forget to record those. The LGMP staff's experience with managers and management indicates that work-related discussions occur almost any time a manager gets together with other people and quite often he obtains important attitudinal information, informally, which may influence his decisions pertaining to work.

One important thing the LGMP staff have learned is the danger of leaving records to the end of the day. Recall is faulty, and often the most important bits of information either received or passed on are missing from recall records. Do not feel the need to put something down for

all times of the day if you do have to depend upon recall — it is not a case of filling the squares, the record has to be meaningful and accurate.

iv Make a note of casual and unusual activities as well as what you normally consider work related activities.

The record is yours, for your use, thus you do not need to be concerned about the type of information you record. A full record will give you a better idea of how much time is taken up with crises, with the actual activities specified in your job description or with other activities such as discussions or meetings which may consume your time.

v   Be honest in specifying your activities.

Some of the simplest, most seemingly inconsequential activities may actually contribute the most to effective management. This will become apparent as you move into the subsequent steps in the process. You will begin to discover some things about management, yours in particular, that you have never thought about very much.

c CATEGORIZE OR GROUP ACTIVITIES

After you have kept track of your activities for about a week, you will probably find that your initial coding system is unsatisfactory. You can then begin to group or categorize activities in a way which is more meaningful to you in terms of effective management. There are a number of potential ways to categorize activities. These include categorization in terms of the actual action which is taking place (e.g. Half-hour telephone conversation with Mary), in terms of the purpose of that action (e.g. Discussed secretarial selection and classification with Mary for half an hour), in terms of the contribution of those activities to your goals and objectives (e.g. Spent half an hour working on upgrading of secretarial staff) or in terms of the managerial role to which these activities contribute (e.g. One half hour on personnel development). Each type of categorization can serve different purposes and you may, in fact, wish to consider more than one type. To give you a better indication of the alternative types of categorization and the purposes they may serve, each will be discussed briefly.

i   On the basis of the action taking place.

This is probably the best basis for an original coding system. It will give you some useful information, e.g. how much time do I spend reading, responding to correspondence, passing on directions to staff and employees, meeting with other managers, etc. It provides you with a breakdown of your working day and it may contain some surprises for you.

While you may be surprised at the breakdown of your working day and at the amount of your supposedly private time that you actually spend in job related activities or discussion, particularly if you are a councillor or senior administrator, you may find yourself saying 'So what?'. This type of categorization does not really tell you whether or not you are spending your time in a useful, productive way.

ii In terms of the way in which the action relates to your goals and objectives

If you are operating under a goals and objectives, or management by objectives or results system, you can categorize the things you do as they relate to your goals

and objectives. Assuming that you have carefully considered the purpose of your job and have established a comprehensive set of goals and objectives, this type of categorization should be particularly meaningful. From the LGMP experience, however, you probably will not be able to assume that you have objectives for almost everything. You will soon find that you are forcing a number of activities into categories which they do not really fit. In such a case, look for other categories for those activities which do not contribute to an objective and this system can still be useful. If you force activities into previously determined categories you may be misleading yourself and missing a great deal of potentially useful information about the things you are doing.

iii In terms of the purpose of the activities and the relationship of those activities to the purpose of the job, organizational unit or total organization.

Strangely enough, as managers, we seldom really think clearly about the purpose of many of the things we do. Yet most of our activities have a definite purpose and most of them do make a functional contribution to the job. Time spent in conversation with others can contribute to good relationships, the obtaining of attitudinal or other information, the obtaining of feedback, better understanding of others, etc. Contemplative planning time, early in the day, for example, can help to put the day (and the task) in perspective. Being visible and engaging in ongoing communication with your staff can improve their motivation and increase their task orientation. The main question for most of us is not 'Are we achieving some organizational purpose with our activities?', but rather, 'Are we using our time most effectively to achieve highest priority goals and objectives?'.

At times it may be hard to define the purpose of an activity and, in such cases, the purpose can be left open to question for a time. Where the purpose of an activity can be determined, however, the categorization may be a useful one leading to an understanding of the consistent, ongoing management activities of a manager or organization. The definition of goals, or even management roles, probably provides one of the most effective bases for the establishment of objectives to improve one's use of time. Objectives, determined in this way, should help a manager to do what he is presently doing in a more effective way, to screen what he is doing to determine whether someone else should really be responsible for certain of the activities, and to establish those areas which need more emphasis in terms of time and/or activity.

The LGMP staff feel that categorization by purpose is the most useful method of categorization, however, categorization by existing objectives is also useful where sufficient activities can be connected to existent objectives. Categorization on the basis of the actual action undertaken may also be necessary as a supplement. We will return to a discussion of further steps in the information improvement process after we examine another related form of activity categorization.

iv On the basis of management role

Highly related to categorization by purpose is categorization on the basis of management role. There is little question that managers play what could be classified as

a number of consistent roles in carrying out their jobs;[4] for example, a leadership role, which involves the influencing of subordinates and others to do what the manager desires. In relatively labour intensive occupations with comparatively low requirements for technological expertise this role is very important. Other roles consistently played by managers are resource and task allocation roles and information sensing and disseminating roles.

Categorization on the basis of roles is useful and probably important but it requires both time and sophistication. Appendix I outlines a set of roles, largely established by Henry Mintzberg, after a considerable amount of research in this area. Mintzberg has advanced these as one possible classification of the management activities he has observed, indicating, of course, that the same activities might be subsumed under quite different role designations.

The LGMP staff recommend that you attempt classification by role, but remember two things:

i do not force activities into pre-established roles which may not fit your management style or the way in which you do your job; and

ii do not forget that there is considerable overlap among management roles both in regard to the management activities which they engender and in terms of their organizational purpose. For instance, a figurehead role (a strong and visible leader), and a motivational role (providing rewards for effective performance), may both aid in attaining better employee output. Similarly, a decision-making role or a task or resource allocation role cannot be divorced from either leadership or motivation roles.

Examples of Role Categorization

Some examples of the ways in which different activities can be sorted into general management roles at different levels are provided below. Suppose, for example, that the Province has just announced that it plans cutbacks in its funding to municipalities. The municipalities are expected to absorb these cutbacks through increased efficiency in operations, and any other possible ways, but the Province has not been specific about where the cuts will be made, and what, if any, assistance it will provide to deal with them.

As a councillor, looking at the information you use and need may be the last thing on your mind. You should realize, however, that information can tell you:

i where you can make savings that will be the least painful in terms of lower levels of service and resultant political impact;

ii how much of an increase in mill rates the community can stand.

Having realized that ineffective handling of information causes confusion, delay, and therefore wastes resources, the subject of information takes on new importance.

As you and your fellow councillors respond to this new

crisis, think about what you are doing, and the information you are using. The names of the roles are not very important. What is important is that you see your activities in terms of a meaningful pattern. For example, many of the things you do will be in the form of an interpersonal, *influence role* with other councillors. You will be providing a *leadership role* for the administration in determining what the coming cuts will and will not mean to city operation, and how to deal with them. You may provide guidelines and direction (*decision-making role*) to departments coming under your committee of council regarding what areas are high priority and must be acted on now, and those which should be delayed pending clarification of the Province's policy.

Your response to the Province would be classed under an *informational role,* when you acted as a spokesman to the Province for the citizens who elected you, regarding what areas should not suffer funding cuts (in an attempt to influence future announcements), the probable impact of service cuts, the ability of the community to bear a greater burden of supporting municipal services through property taxes, and so on. You will also be acting in a *spokesman role* for the municipal organization when you explain what you know of the situation as it affects the community to your constituents, how cuts in funding will effect services, and so on.

Another major role you will be filling in this situation will be that of a *resource allocation role.* You and the other councillors will need to make decisions about what areas are high priority, where savings should be made, what programs should be cancelled or delayed, and so on.

d MONITORING PERIOD

After you have thought about the problem of categorization and have set up a tentative system or combination of systems of categorization, you can proceed to monitor activities and to place them in categories, revising those categories as you see fit. This period of monitoring should continue for at least another two weeks, during which you can examine the decisions you make and determine the information you are using to make them. Then you can compare these to the decisions you feel you should be making and the information you should be using. Ideally you will have a full discussion regarding these means of improving your personal handling of management information with an internal advisor.

To this point, we have generally ignored the role of an advisor or facilitator in this process. The processes of record keeping and of activity categorization can be undertaken without help but they are not as easy as they sound. If a facilitator does nothing else but act as a sounding board, reflecting the things he has learned about categorization from his own experiences and the experiences of others, he can still be a valuable source of aid to individual managers.

e ESTABLISH TIME ALLOCATIONS OF COMMITTEES

Committees, from the outset, should also set up a process to review the things they do and the way in which participants spend their time. In this case, a facilitator can be very helpful, using the initial stages of each meeting to orient the group by discussing the committee's objectives, and the final stages to review what

4 See Henry Mintzberg, 'The Manager's Job?: Folklore and Fact, *Harvard Business Review*, July-August 1975, or Hodgson, R.C., Levinson, D.J. and Zeleznik, A., *The Executive Role Constellation*, Boston; Harvard Business School, 1965.

has been accomplished and to compare results with the objectives for the meeting.

f WORKSHOPS

Workshops in activity monitoring and activity categorization are useful ways of generating initial interest and of helping managers to look more closely at their own jobs. Particularly in the next stage, which involves the identification of decisions and the information used to make them, a preliminary workshop should be helpful. It is recommended that managers should work with their peers until they have developed confidence and expertise in categorizing activities, in identifying decisions and in establishing the information they have used to make those decisions.

2 Identify managerial decisions

You make a decision when you decide upon some course of action, even if that choice involves maintaining the status quo. Once decisions are made, of course, they must be carried out. Many of the activities which you have previously identified will involve the communication of decisions, the monitoring of their implementation and the obtaining of feedback regarding their effectiveness.

What you will probably not have identified, in the activities you have noted, will be the decisions themselves and a description of the information upon which they are based. You will not have identified these very important aspects because decisions are extremely hard to recognize and a large proportion of them are made unconsciously. They involve mental activity as opposed to physical activity. It is axiomatic, as a consequence of the difficulty of identifying decision points, that the information used to make particular decisions is seldom, if ever, thoroughly examined and, as a consequence, most of the managerial assumptions and discussions about information are shallow and inadequately based.

In reality, the most important reason for the identification and classification of management activities is the contribution that such a process will make to the identification of management decisions and information requirements. When you ask yourself why you are carrying out a particular activity, you are probably identifying the management decision which stimulated that activity. It may well be that you feel that the things you do are based upon decisions made elsewhere, but that is only partially true. You are certainly strongly influenced by others, particularly higher level managers, but in reality it is you who decides exactly what you do and how you do it. It is also you, in most cases, who communicates your decisions to lower level managers and employees. The reactions of employees and results achieved, are influenced by the fact that you were involved, even though you may only regard yourself as relaying an upper management decision.

If you have classified management activities according to their purpose it should be easier to trace decisions. For instance, a councillor has classified a number of activities such as:

a questions asked of administrators about costs of administrative programs;

b efforts to reduce personnel costs; and

c discussions regarding alternative methods of carrying out engineering projects (consultant vs. in-house);

as 'activities which contribute to efficiency'.

At some point this councillor probably concluded that the administration was inefficient, or at least, that administrators were not making sufficient efforts to examine alternatives for cost savings. By examining his activities he could tell when he reached that conclusion and identify the information that he used. This might help him to reorient his activities and, possibly, to question the conclusion that administrators are inefficient.

An administrator might find that he spends a great deal of time talking with subordinates, also, that he has established a number of methods to control their behaviour and, finally, that he is doing a number of routine tasks which could be done by one of his subordinates. At some time in the past he has apparently reached the conclusion that his subordinates are not dependable. The actual timing of that decision may be hard to determine, but its consequences are rather apparent, and much of the information which led to the decision is probably identifiable. The manager is, of course, concerned that work is effectively done (perhaps, in fact, is overly concerned with his own reputation) and he does not trust anyone else to do it without continuous supervision. Inadequate delegation will lead to management overload, however.

These examples have been used because they represent decisions which are not customarily thought of as management decisions, and because they have far reaching consequences for the development of trust, communication and operational effectiveness in a municipality. This type of analysis can lead to considerable self examination and understanding because it can reveal the motives behind many management activities and decisions.

As a manager examines his activities and the decisions he makes, he needs to consistently ask himself the following questions:

a Are these the decisions I should be making?

b Are my decisions and the resultant behaviour warranted?

c What information did I employ for that decision and was it sufficient and accurate?

d What information should have been used?

e What information do I need for future decisions?

Frequently, managers will find that they are not making some important decisions, and/or that they are making decisions which should really be delegated to someone on their staff. Whenever it is clearly possible to delegate tasks, they should be delegated, leaving the senior manager free to obtain information and to plan and work with other managers on departmental or municipal management improvement.

Identifying the information used for decisions is an important and difficult step in management improvement.

3 Determine the information used

The main thesis of this part of the paper is, that there is

little advantage to identifying the information used by a manager without knowing how and why it is used. Subsequently, in determining what information is required, the reason why it is required and the way in which it is to be used must be determined first.

As decisions are identified, a manager can attempt to determine the information upon which each decision was based. For technical decisions or decisions relating directly to output, the information used is usually relatively easy to ascertain. For personnel decisions or decisions relating to other aspects of management, such as the allocation of responsibility, the problem usually is more difficult.

The following steps should provide a framework for the identification of information.

a Ask yourself what information you are receiving in each of your management goal areas or, failing that, in each of the management activity categories you have identified. If you are keeping a record of decisions, as suggested, ask yourself what information you are basing each decision upon.

Remember, just because you receive information you do not necessarily use such information. Remember also, that decisions which may seem trivial or unimportant at the time, may have significant impact later and that you may actually have information regarding the potential impact of such decisions. For example, a decision to keep a poor worker on staff may be almost unconscious and you may have never considered the effect of that decision on the attitude and productivity of other employees. You may have made the decision because you don't like to be unpleasant, without considering some information which is actually known to you about the potential negative connotations of your action. This type of consequence (effect upon other people) can readily result from careless decisions and yet you really had the information needed to make a different decision if you had only stopped to consider the consequences.

b In order to have a record of the information used, you may find it useful to jot it down beside the record of the decision-making activity. For example, – 'Decided to move Bill from Herb's crew to Clark's area.' – Basis for decision – 'Bill hasn't worked out very well with Herb, and Clark is shorthanded through retirements'.

If you have trouble identifying the information you have used it is sometimes helpful to look at the action you contemplate. That frequently will give you some indication what prompted the decision. For example, a chief administrative officer may decide to discontinue an Urban Development Division and, therefore, to lose the services of the relevant administrator. If he plans to develop a similar function, possibly under a different name in his planning department, it is probably a feeling that the job is being inadequately handled by the present administrator which has prompted the decision, although even the CAO may not be entirely conscious that it was doubt regarding the individual's capability which prompted the decision.

c You may, of course, find that you must put your decisions down to a 'hunch' or 'feeling' when you

cannot identify specific bits of information to back them up. If possible, however, try to establish the information upon which seemingly intuitive decisions were based. This takes some time and thought, but you are really dealing with how well you do your job and the process of identifying the information which you use is rather important.

It is extremely important that you recognize the role of both formal and informal information in the decisions which you make. You are obtaining informal information all the time, in the things you see, the things you hear, the non-verbal reactions of people, and your own feelings about various things which happen. Even formal sources often need to be interpreted informally. For instance, the way an order or a letter is worded may influence the reaction to its content.

Combinations of formal and informal information may often be utilized in dealing with situations. For example, a councillor may be able to get advance warning about future Provincial action through his personal contacts with Provincial officials or politicians outside the municipal context. In the same way, a line manager may hear of innovative approaches to cost savings through his professional journals. By discussing these ideas with his department head, he can apply that information to immediate problems facing the organization.

This combination of unofficial and official sources, forms a personal network through which many different kinds of information are communicated. Much of the informal information that reaches managers in this way can be very important in influencing their decisions, but it needs to be identified clearly and examined to see if it is reliable, whether it would be more appropriately handled within the formal system (for example, to ensure that other managers have access to it), and to examine ways of improving the way it is used.

The LGMP experience has indicated that there is considerable confusion not only about what management information is, but also about where a manager gets his information, the sources he is actually using, and the quality of some information in his personal information network. For example, one manager may define the information he uses for management as coming only from sources within his own branch and then, without being aware of the contradiction, identify a number of external sources of information. Careful examination of your beliefs about the information you use and your sources should expose and help to prevent such confusion.

Similarly, many managers mistrust their informal or verbal sources of information, or feel that in order to justify using them they must get this information in writing. At the same time, since so much of their communication is interpersonal in nature, they tend to use information they receive in verbal form more than they may feel comfortable about, or are willing to admit. This, of course, leads to more confusion about the way information is actually handled and used, to difficulty in ensuring its reliability, and also leads to conflict and tensions between people who supply and those who receive information. For example, in the scenario of funding cuts described above, a department head may

26

need to know from his division heads to what extent various standards for roads maintenance would cause increased or decreased work load and how this might reflect in personnel and equipment costs, and so on. While he may be able to get a sound enough verbal picture from meeting with his division heads, he may desire a detailed report with actual and projected figures, current productivity levels and so on, to present to council. This will demand considerable time not only of division heads, but of lower level line managers as well, who may already feel overworked and threatened by the announcement of impending cuts. The department head may feel that having only verbal information might indicate a 'lack of control', to council, and feel that council will demand to have a written report, whether or not they read it, because of a lack of confidence that division heads and department heads are supplying reliable verbal information. Thus feelings about information and its reliability can have a considerable impact upon workload. The simplest, easiest means of getting information to the point where it is needed is often the best one.

While you are determining what information you have used for a decision, it is also important that you identify its sources. You may discover that certain informal sources are unreliable and, if that happens, you can learn to discount information from that source in the future. Gradually, through experience, you can learn which sources are generally reliable and which need to be checked. When sources of information fall within your area of control you can take action to upgrade the quality through working with the people who are responsible.

4 Decide upon appropriate management decisions and activities

In working with managers the LGMP staff found that, in general, managers:

a often were spending a good deal of their time doing inappropriate things;

b frequently were making decisions which should have been delegated; and

c were hesitant to make many of the decisions and recommendations to higher levels of management that they should have been making. Goal and objective setting training helped to some extent, although the delegation of authority to lower levels was slow, and the assumption of increased responsibility for recommendations to higher levels was dependent upon reinforcement by council and/or the chief administrator. Management training in delegation helped managers to see the problems involved in lack of delegation more clearly whereas joint problem identification sessions with the managers who reported to them contributed to the senior manager's confidence in his people. More frequent communication involving joint problem identification and problem solving seemed to be an important aid to mutual understanding and co-ordination at all management levels.

The important factor for an information improvement program lies in the fact that the system should be designed to meet the information needs of managers who are operating in an effective and efficient manner in achieving a defined purpose. If managers are operating ineffectively by carrying out inappropriate activities or by inadequate decision-making, the information network established to meet their needs will also be inappropriate. As indicated earlier in this paper, objectives must contribute to the achievement of an organizational unit's purpose, or they are of little use. By the same token, managerial decisions must be those that are appropriate to the manager's area and level of responsibility or they may be dysfunctional to the effective operation of an organization.

Thus, at this point, having identified the activities you are carrying out and their purpose, plus the decisions you are making, you need to stop and review both activities and decisions. Discussion both with your supervisor and with a facilitator may be helpful at this point. You should ask yourself, 'What decisions *should* I be making?'

When you have determined what decisions you should be making you are ready for the next step in the process.

5 Determine the information required and the most appropriate source

Once you have determined which decisions you should be making and what activities you should be carrying out, you are in a position to identify your future information needs. At this point you can examine your decision-making requirements, essentially saying to yourself, 'Ideally, what information would I like to have so that I can make the best possible decisions?'. Having identified the ideal information situation, you can then turn to your previously conducted survey of the information you are presently obtaining and using. By comparing your information needs with the information you are currently receiving, you can establish several information categories:

a information being received which is not required (to be discontinued);

b information being received which is required (to be continued and examined for possible alternative and more economical sources, transmission, storage, etc.);

c information required which is not currently being received.

Subsequent action on your part will involve all categories, and these are discussed in some detail on the following pages.

a IMPROVING INFORMATION ALREADY RECEIVED

Information which is being received and which is still needed should be examined for alternative forms, alternative sources and more appropriate timing. Is it arriving in the simplest, easiest to obtain and cheapest manner or is it possible to obtain better and more economical information from an alternate source? Could storage methods or coding be improved? Is the information going to other positions where it is required? Is the information reliable or could it be obtained in more reliable form from another source? These considerations will be dealt with in some detail to provide you

with more explicit guidelines in thinking about the information you obtain in regard to the following.

i   Form

Is the information you receive in a form that is useful to you? Does it tell you what you want to know in a way that does not require a lot of unnecessary time on your part to dig through irrelevant material? Is verbal reporting satisfactory, or are there too many details for you to carry in your head? Is the information you get from other departments (e.g. Finance or Personnel) in a language you can understand? Note that it is often very difficult for managers to admit that they do not understand or use information which they receive, and advisors should, therefore, take special care to assist managers to identify this type of problem.

ii   Frequency

Do you get information when you need it, or is it too late for it to be useful? Identify the reasons for delay where possible and what changes you think might help. (It is possible that you contribute to delays by not making your requests for information, or your needs clear enough, or in cases such as zoning changes where information is passed back and forth a number of times, by completing your own part of the process late.)

Do you receive information at intervals that are too short for you to identify trends, or too long for you to pick out problem areas? For example, productivity reports should be fairly frequent to enable a line manager to spot and prevent problems, while the department head requires less detail and a wider perspective. When changes are being contemplated in this area, it should be remembered that it is important to regulate the rate at which managers are bombarded with information because, when they are overloaded, their ability to absorb any information is severely limited.

iii   Accuracy

How accurate is the information you receive, and how accurate does it need to be? In many cases, the costs, in terms of time and resources, of attempting to achieve accuracy in estimates far outweighs the value of such information. The accuracy of the information councillors need for budget and policy decisions, for example, is on a different level from that required by the supervisor of stores in the purchasing division. Examine your information with this in mind, and ask yourself whether you demand a certain level of accuracy because you need it, or to make up for the absence of other information or to bolster confidence in the decisions made using this information.

iv   Accessibility

How easy is it for you to get at information once you or your unit have received it? Are filing systems clear and generally understood, or is information frequently lost once it is stored or filed. Are storage procedures suited to your information needs? In some cases, information is removed from active files and stored away while it is still useful or needed and then retrieval is a time consuming process. Do you encounter this or similar problems? Is duplication of records and files common, and is it really required or would a central file for the branch,

department, or whole organization be more appropriate?

v   Analysis

Is the information which you receive or retrieve from storage aggregated or otherwise analyzed and translated into a message that answers your questions? Senior managers especially should not have to sift through pages of data or detailed background reports to get the information they need. Should the information you receive go to an assistant or lower level manager for intelligent 'filtering' and if it does, is that person aware of what your information needs are? This kind of filtering would include reporting exceptions from the normal situation (e.g. in cost increases) and the reasons for them, identifying changes in trends, highlighting changes in information, picking out significant or surprising facts and pointing out the limitations of the information itself.

vi   Responsibility

Because of the foggy thinking about what information is, and the role it plays in management, responsibility for generating, reporting and obtaining information is rarely clear, (e.g. in many municipalities, the important task of monitoring Provincial and Federal funding programs for possible application to the municipality is not clearly assigned and funding opportunities are often missed). Every manager's goals and objectives should therefore include his information handling responsibilities which can be worked out jointly with the people with whom he communicates.

vii   Exception reporting

Are your people briefed to report exceptions from expectations or forecasts? Do you hear about problems soon enough? If not, why not? Is the information you get about special situations reliable and clear, or does it leave you alarmed but uninformed? Are there clear and well understood procedures for exception reporting, and are they sensitive enough to pick up little problems before they become big ones?

viii Information bottlenecks

Are there particular points in your unit or in the organization where you have found that information is held up for some reason? Examine these problem areas, and the reasons for the delays or other problems. Is it simply overload, inadequate methods of communication, unclear procedures, failure to delegate sufficiently (as when a single piece of correspondence passes through each managerial level in the department for approval), or something else?

b   OBTAINING ADDITIONAL INFORMATION

Having decided upon the information you, ideally, would like to have, the next step is to consider the availability of such information and its costs.

You are best advised to consider potential sources, working outward from the people closest to you. The more immediate the source and the more direct the path of information, the greater the potential for accuracy. Having your staff maintain records of performance and expenditure may represent some duplication with the formal management information but:

i your data are immediate;

ii your staff are required to supply reports to the formal system in any case;

iii records of current production status can be motivational;

iv simple records both provide and imply a form of control;

v to simplify the data and bring about a greater probability of noting a need for change you can initiate exception reporting; and

vi since the reports are coming directly to you and your people know that they will be used, the data are far more likely to be accurate and you can control the quality to a far greater extent.

While the LGMP staff do not generally recommend duplication of records, they recognize a need for a reporting system which follows the chain of command. Data sent to outside agencies, such as data processing centres, are less personal than information reported to line supervisors. There is more likely to be a desire to improve performance in the latter case and merely to try to make the data look good in the former case. Part of a manager's job is to be immediately aware of what is happening in his unit. Formal information reports are seldom immediate enough and usually only serve as records and back up information.

Formal summary reports are often extremely useful to upper level managers who need a broad picture of results and overall performance. Data centres can usually program for ongoing trend analyses which can act as warning signals to managers and can also be very useful in planning operational programs, income and expenditures in the future.

For each type of desired information a manager can:

i determine the possible sources;

ii estimate the probable relative cost of obtaining the data in different ways and estimate the costs of keeping records in his own unit;

iii determine which source is best able to supply information when it is needed and information that is most accurate and in the most appropriate form;

iv determine which form is most appropriate for effective and efficient operational monitoring and control;

v examine the motivational consequences versus the time involved in keeping unit records;

vii indicate to upper level managers, clients, suppliers and data processing divisions, the type of information desired and the most useful form that information can take. Where information from the public is desirable, potential cost and potential accuracy of such information needs to be considered. The LGMP Team suggests that line managers should merely indicate what information they would like to have from the public and information-processing experts can examine the behavioural, technical and financial implications involved in obtaining that information. Certainly costs will outweigh benefits at some point in information sophistication, but

line managers need not wrestle with that problem;

viii develop measures of performance that provide needed feedback for effective and efficient management. (The LGMP book, *Improving Management Performance: the Contribution of Productivity and Performance Measurement* goes into some detail in this regard);

ix most important of all, examine his own management processes and those of his staff to determine how much of the information he needs can be obtained through the determination of unit, program and individual goals and objectives, the development and improvement of procedures and the monitoring of results, preferably on an exception basis.

6 Insure that information requirements are clearly stated

Having fully examined his information needs and the potential for obtaining that information within his own line organization, a manager can indicate his requirements for information to senior management, clients, suppliers, other managers, data processing, divisions, etc. In fact, a major requirement for effective information management involves the need of any manager to make his information needs clear. Some things you should consider in this regard include:

a ensuring that the person you report to is aware when you need information from him and when you are unsure regarding what he expects from you;

b initiating objectives to improve information handling;

c making sure that the people who report to you are clear about the type of information you expect from them. This includes providing guidelines on when you want information, in what form, and to what degree of detail. A great deal of time can be wasted developing complex and detailed reports which are never used. It is also important that you ensure that they will let you know what information they need from you.

7 Improve the way in which you obtain information

An important emphasis throughout this paper is the involvement of all managers in setting up their own personal information network. To help to ensure that your network is as effective as possible you should:

a ensure that you are obtaining information in the easiest, simplest way, e.g. over the telephone as opposed to writing letters requesting information;

b obtain as much information as you can from meetings with others. A major role of senior managers involves the obtaining and disseminating of information at meetings;

c develop a priority system to ensure that important activities are not overlooked;

d keep other managers, e.g. data processing, informed of the value of the information they send you. You should also check to ensure that they are receiving information they need from your unit on time;

e set up a system to ensure that you obtain the infor-

mation you need from outside the municipality. For example, the City Solicitor's role might include reviewing and interpreting Provincial and Federal legislation and policy statements, and passing on relevant information to councillors and department heads;

f   make sure that other people in the organization are aware of your responsibilities so that they can pass on information you need, and contact you for information you could best provide them;

g   make an effort to maintain contacts and open communication with colleagues who are not in your direct line of responsibility and with colleagues in other cities and at other levels of government. As a councillor, making an effort to talk to councillors on other committees on a regular basis however informally, to supplement official reports, is a useful way to keep informed on everything which is taking place.

8   Improve the information you provide to others

An important feature of effective management is ensuring that your decisions are clear to those who must implement them and that you provide them with all the relevant information you have available. You can become more effective in this area by:

a   asking yourself what information various people need to do their jobs and then supplying what information you can. Joint discussions with others can help in this area;

b   putting controlling or regulative information on paper and ensuring that the meaning is mutually understood. Also communicate verbally on a face to face basis, when possible, to facilitate feedback and reduce misunderstandings. You may find that you have consistent communication problem areas which can be identified and gradually eliminated;

c   as a councillor, letting administrators know that you are available for discussion of problems and make it clear what you expect from the administration and what your priorities are. As an administrator, making an effort to explain your position and present alternatives to councillors and ensuring that your reports are clear, open and as informative as possible;

d   ensuring that it is possible for newcomers to 'learn the ropes', and to understand their responsibilities within your unit. Newly hired and newly promoted managers can create problems if they do not understand their roles. Councillors are often unfamiliar with the basics of municipal government and sometimes learn more about it in community college courses than in their municipal government itself. Information kits for new councillors are a useful idea presently being introduced in many municipalities;

e   paying attention to the way in which you communicate with others, considering how they will perceive your message and what their feelings and reactions will probably be. The impact of information can vary greatly depending upon how the message is delivered.

9   Screen personal information

Whether or not you go through the rather lengthy procedure just described, there are some relatively straightforward steps which you can take to improve the information coming to you and to make more effective use of your time.

One useful technique in examining personal information flow is to take an hour to look through the papers which have been piling up on your desk. Do not read them, just sort them into:

a   things you have to read (not because somebody said to, but because you need to, to do a good job);

b   things you would like to read (because you're curious, or because they might help you in your job); and

c   things you really don't need or want to read (because they're too dull, too long, irrelevant, or whatever).

Who sent you each of the reports, memos, balance sheets, etc. in each group? Why did they send it to you? How long has each paper been there? Do the same thing for meetings, modifying the last category to meetings you wouldn't attend if you had the choice. This should tell you something about your information needs and how well they are being filled.

Now take the first group (for both paperwork and meetings). Try to think of information you really need that you do not have. Take care not to include things which, if you had them, you would put in the second group of interesting information. How could the information you receive be changed to make it clearer, more timely or easier to read? Is there anything which you already knew from another source? Is that just a fluke — or does it usually happen? If it is common, can you eliminate the duplication, or make suggestions on how it could be eliminated?

Now look at the second group. Is there anything in this group that you would have considered necessary except that it was too long, or to obscure to read? How could it be changed so that you could get the information you need?

Look very closely at the last group and think carefully about why you will not be reading this material. Is it because you distrust the source, or just because the material contains no useful information? Why are you getting it if you are not reading it? What can you do about eliminating it?

Going through the meetings and written information you are involved with in this way two or three times over a period of several weeks should help you to become more aware of your use of information. Try to relate what you discover to what you have jotted down about your own decisions and communication (conversations, feuds, etc.) with other people. Where are they connected? Where is there duplication? Where are there gaps? What changes would you make to things that would work more easily, more smoothly, e.g. in meeting agendas, in information formats, or in the way you handle information? How can your staff help? What, if anything, is preventing you from making the changes you have identified?

SUMMARY

At this point we have completed our discussion of the involvement of individual managers in the initial implementation stages of an information improvement program. If they followed these suggestions they would have examined their activities, would have determined what decisions they are making and what information they are using, they would have analyzed the decisions they should be making and the information they, ideally, require to make them. They would have determined the current availability of information within their own units and would also have identified the information they would like to obtain from outside sources. Where alternate sources might exist, they have indicated timing requirements, the desired form of the information they need, and probably have determined the cost of obtaining the information within their own units.

While all of this sounds extremely complex, it is important to recognize that many of the most urgent requirements for information will be filled through the development of effective management processes and procedures. A great deal of the additional information a manager needs can usually be obtained within his own unit. His information requirement from senior managers will be mainly in the form of effective direction, definition of responsibility and authority, identification of potential constraints upon his actions, resource availability, and feedback on his performance, all of which are part of an effective management system.

The information requirement from other managers who supply a manager with services will mainly be in the form of an overview of potential services available and their relative costs. His required information from clients will be in the form of their reaction to past services and their requirements for the future. Where the client is the public, people with information expertise need to become involved in determining the practicality and potential for obtaining feedback from the public and the immediate needs of the public for service in the future.

Thus at this point, we have reached the stage in information system design where information improvement programs usually begin, the development of a formal information system to supply managers with the information they require. In the next section, the integration of the information needs of individual managers throughout the organization will be discussed and a framework for the systematic improvement of local government information will be outlined.

Part III

Initiating A Program To Improve The Handling and Use of Information

In planning for the introduction of a program of information improvement, two types of considerations are important. First, certain preconditions in the organization are necessary before the change can have any real chance of success. Second, the strategy for the introduction of the program has to be shaped to fit the organization and, in fact, often needs to produce changes in the management of the organization as the program unfolds. Before program strategies are discussed, along with the factors that determine those strategies, the preconditions that seem to be necessary for the successful initiation of a program of information improvement will be examined. Since these are covered in some detail in other LGMP publications[1] they will only be identified briefly in this paper. Only one aspect, the original motivation for the introduction of an information improvement program, is not discussed in the other publications. Since this is an important factor in shaping strategy it will be discussed in some detail.

PRECONDITIONS FOR THE INTRODUCTION OF AN INFORMATION IMPROVEMENT PROGRAM

Some conditions which should exist prior to the introduction of an information handling improvement program include the following.

1 A recognition of the need for an information and management improvement program by a person or persons with a large amount of influence in the organization. Either the initiators must be personally 'hurting', as a result of the present mode of operation, or they must recognize the need for improvement and have the power to put pressure on others to make them feel the need for change as well. Directly related to this requirement is the motive or reason why the information improvement program is desired. Municipal councillors and administrators are advised to be sure that this motive or motives are clearly understood, otherwise an insufficient, unsatisfactory or even unnecessary program may be launched as has been the case in so many municipalities. This is an extremely important factor which will shape the program and thus it is discussed in more detail immediately following the identification of the other important preconditions.

2 A recognition of the relationship between management attitudes, methods, styles, and techniques and the availability of information, including the type of information required. This relationship has already been discussed in detail in Part I of this paper.

3 The existence of upper management support, where necessary, and the potential to obtain lower man-

agement and employee acceptance of the desired change. In this respect, information improvement programs are exactly the same as any other organizational change program except in the case where an individual manager wishes to improve his own information handling effectiveness. Any manager can do a number of things on his own, but where the improvements he desires involve other managers or affect the way in which he deals with his own supervisor, the supervisor's acceptance, if not full support is required.

4 The existence of an internal facilitator with sufficient understanding and skill in providing a management advisory service to give ongoing advice and support to managers involved in the change program. Information improvement is a complex task and managers need help in identifying their information needs. The information contained in Part IV of this paper should be extremely helpful to managers involved in information improvement programs and also to those managers playing the role of internal advisors.

5 Finally, for any major program of information improvement to be effective, top level managers, at least, must think corporately.[2] This means that they must be prepared to work with other departments to establish mutual filing systems, co-operate in terms of computer and other business machine support systems, and agree at least generally upon corporate purpose, goals and objectives in areas where co-ordination and co-operation are required. Particularly in the case of internal support services, managers must be prepared to accept advice and planning input from their clients regarding the support services they provide.

MOTIVES LEADING TO INFORMATION IMPROVEMENT PROGRAMS

Managers will attempt to introduce changes when they perceive that their efforts at management are being frustrated. This frustration and desire to improve does

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1 The conditions that must exist in an organization prior to the implementation of a management improvement program are discussed in some detail in *The LGMP Experience, Phase I* and also in Paper 2 in *The LGMP Experience: Guidelines for Organizational Change in Local Government*. Information improvement programs can be regarded as one type of management improvement program.

2 The subject of corporate management, which is a major problem area in local government, is discussed in detail in the LGMP Publication *Corporate Management: Its Role in Local Government*, which is being published concurrently with this book.

not necessarily come about merely because managers are not operating effectively. In fact, the desire to change and improve is most likely to be present in relatively effective organizations with alert, able and highly motivated managers.

The managers who 'hurt' to the greatest extent in the area of management information are the ones who are most likely to initiate changes in information handling. For example, managers who have the responsibility for data processing or management information systems are vitally concerned with the capability of the municipality in this area. Unfortunately, unless the other managers in the organization, who are data-processing clients, perceive a need for new approaches to management and management information, the specialist's initiatives have little possibility of success. In addition to seeing the need for these improvements, however, they must become deeply involved in the program of improvement if it is to be successful.

Recognizing the fact that initiatives for improvement in these areas usually arise with progressive councillors and administrators who are hurting to some degree in their efforts to do their jobs effectively, there seem to be four major motivations for the introduction of management and information handling improvements. These include:

1 a crisis or series of urgent situations;

2 a concern about the quality of management generally and the skills and resources managers have available;

3 a belief that the development and installation of a modern, computerized record keeping, accounting, or information processing system is a necessary aspect of effective management; and

4 a concern by a thoughtful manager or a number of managers, who may be at almost any level in the organization, that they are unable to do their job or jobs effectively and are looking for ways to improve.

Each of these motives for initiating improvement may arise under quite distinct circumstances that create different pressures upon managers. Different circumstances require different responses by managers, necessitating different strategies for dealing with the causal problems. For that reason, each of these motives for the initiation of information improvement programs will be discussed in some detail.

1 A crisis or series of urgent situations

The crisis or urgent circumstance may vary in dimension. For example, a major crisis exists in municipalities in Ontario at the present time because they are faced with a decrease in the level of Provincial support. On the other hand, a relatively minor set of urgent situations or a series of relatively minor problems can be caused by poor communication and lack of joint information access between a fire department and an engineering department, where the fire department lacks information about repairs to water mains or recent changes in the amount of water pressure in a particular area. In each case decision makers lack crucial information and/or management capability to respond effectively to the emergency.

A desire to improve information will occur in municipal government when snarled lines of communication or new challenges to managers prevent rapid reaction to pressure. This usually becomes evident in a crisis situation where the customary reaction to pressure has failed. Attempts under such circumstances to improve methods of handling information, to identify information needs, and to explore ways in which information could be used more effectively are usually relatively superficial and not very successful because:

a there is time pressure;

b managers may feel insecure, particularly if the crisis appears to threaten their jobs or makes demands upon them that they are unsure they can meet. They also may be unsure of the extent of the crisis and its potential implications for them and for their relationship with the public. Under conditions of high uncertainty, rumors may develop and managers are likely to become defensive. When this happens, managers are unlikely to be prepared to take major initiatives and are likely to favour cosmetic action instead of dealing with fundamental management problems;

c there are tendencies to concentrate on correcting the most obvious failures without uncovering the reasons why the problems occurred in the first place, and to fail to determine how specific problems with information and management are related to each other and to other problem areas within the organization.

Similar crises occur at the individual manager level but are not so obvious unless they involve identifiable programs. Thus, managers may manage from crisis to crisis for long periods of time and often will not act to improve their information handling and decision-making approaches without externally induced pressure or incentives.

On the other hand, the existence of a crisis may actually be a boon to those individuals who wish to initiate improvements in a management system. The reason for the improvement is obvious, the change may actually act to alleviate threat, and the motives of the people initiating the change are less likely to be suspect. Cooperation, cohesiveness and joint co-ordinative efforts are more likely in time of crisis. In fact, the effective introduction of any change is probably dependent upon the existence of some insecurity in an organization. Secure, stable organizations are often not very adaptive, which means that effective management probably includes the ongoing generation of a certain degree of uncertainty. Proposed changes can then be aimed at the alleviation of insecurity through the correction of management deficiences.

2 A general concern about the skills and quality of management

This type of motivation usually arises when top management has changed or has somehow become aware that the organization is not operating as effectively as it should. As long as the initiator or initiators are at sufficiently high levels in the organization and can find support for their contention that general improvements

in information handling are needed, this motive is likely to lead to a comprehensive approach to change.

In any large scale program to improve information handling, it is important that each manager who is involved becomes an initiator for developments at his level. To become initiators managers must understand the reasons for the changes and, in fact, play a role in deciding which changes should be made and how and when they should be introduced. Otherwise, managers and employees can easily come to believe that the examination by others of the information they use is a way of monitoring their performance and that their jobs may be endangered, budgets cut or a large portion of their responsibility may be removed. Since information and the way it is communicated is so susceptible to distortion, managers can easily thwart approaches to improving information handling for reasons of self protection. They will passively block attempts to improve management if they distrust their superiors and see the management improvement project as an attempt by upper level managers to protect their own power and influence. Initiatives in which sensitive areas are ignored, where there is a failure to convince managers that the conclusions from the analysis of their information habits will not be used against them, or efforts which are based on the acceptance of superficial descriptions of problems and solutions, are unlikely to have any significant positive impact at all. This paper contains suggestions for methods of initiating and implementing changes that are designed to deal with these considerations.

3 Technological updating or improvement

The great proliferation of new information technologies has been a primary motive for efforts at information improvement in recent years. Unfortunately, the problems in information usually result more from inadequate management than they do from unsatisfactory information technology. The adoption of new techniques of information handling will not solve management problems and unless the new technology is successfully adapted to the present management system, even greater problems may result. New information handling technologies can be extremely useful in a wide variety of areas, although they can also be grossly misused. There is a considerable body of literature available on developments in this area.[3] The experience in both the private and the public sector indicates, however, that the initial enthusiastic claims by producers of new equipment, regarding the potential to have information for policy decisions at every manager's fingertips, have not been borne out. This tends to support the LGMP Team's conclusions that improvement in information handling largely involves the development of the management capability of individual managers throughout the organization. Without this capability, new equipment will not answer the problem, however sophisticated and expensive it is. The authors, therefore, offer two cautions to those considering technological change in information handling.

a Regardless of the technology, a sound understanding of what information is needed, and how it will be used in management, is absolutely irreplaceable as a first step, before working on the mechanics of obtaining, transmitting, storing, retrieving and reporting data.

b No matter how well qualified the person is who designs the information system, it will not be effective unless the managers themselves understand what their own information needs are, are aware of the ways in which the system can and cannot meet those needs, and play a large part in personally contributing to the improvement of their own capacity to handle information.

4 A recognition of the need for improvement by individual managers

Not infrequently, individual managers, particularly those who are very task oriented and highly motivated, will recognize the inadequacy of the information available to them. They will attempt to improve communication systems within their own areas of responsibility but frequently lack the expertise to develop new filing systems, reporting systems, etc. A municipality can provide aid to such managers by hiring an internal consultant with the necessary administrative and data processing skills. Provincial governments could provide advisory services in these areas for managers in smaller municipalities. Part II of this paper is specifically intended to aid managers who find that the information they obtain is inadequate and wish to improve their own personal use of information. The description contained in that part of the paper should also be useful to data processing staff and to internal management consultants in helping other managers to improve their own information handling capacity.

Defining the type and intensity of motivation

Unless a large number of top managers in a municipality are prepared to devote a good deal of energy to an information improvement program, the initiative is unlikely to be successful. Thus it is important to define clearly why the program is being undertaken, to determine whether or not it should be undertaken and to have committed support to the program before it begins. In the case of the first three motivations for large scale information improvement programs, just described, the hazards of proceeding without clearly defining the need for the program and its purpose were indicated. When the purpose for the program has been firmly established the following steps are suggested for the initiation of a management improvement program.

STEPS IN INITIATING A MANAGEMENT INFORMATION IMPROVEMENT PROGRAM

1 Preliminary considerations

Before the initiation of any major information (or management) improvement program can be seriously considered, there must be an awareness by a number of senior administrators and, preferably, councillors, that management problems relating to information handling do exist. This awareness can be stimulated by evident failures in management, by public or provincial

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3 For example, see Whisler, T.L., *Information Technology and Organizational Change,* Belmont, Calif.: Wadsworth Publishing Company, 1970.

pressure, or it can come from senior administrative or elected managers with or without the help of consultants. Whatever the source of the pressure it must be accurately focused and of sufficient intensity to convince the managers, who are to be involved in the program, that there is both a definite need and a potential for improvements in management effectiveness on their part. Once a widespread feeling of dissatisfaction with the existing state of management exists, a number of other steps become possible.

2 Obtaining effective leadership — A program director

The LGMP experience clearly indicated the need for strong leadership within the municipality if a major management improvement program is to be successful. In addition to the need for the development of clear goals and broad objectives, any program that involves extensive changes in management style, processes or procedures is bound to meet resistance because rewards are slow and may sometimes not be apparent at all for long periods. For this reason and others, strong, effective leadership is important, generally the type of strong and influential leadership that only a prestigious internal manager or managers can supply. Even where a chief administrative officer or a major department head accepts responsibility as a program director, he will need willing support from a large number of the major department heads in the organization. During the LGMP, in fact, an inability to involve department heads from some major support departments had a very serious negative effect on the Project in certain municipalities. This might not be quite such a serious problem in an information improvement program but, as indicated earlier, some of the most important information for management in local government is generated by top level managers who outline corporate priorities and set up programs and support systems to meet corporate objectives. The absence or lack of commitment by any department head can create serious problems for the others and for any ongoing program of management improvement.

Thus a strong, influential program director or program directors is/are necessary because those individuals who play the controlling role must be able to develop certain conditions within the municipal organization as the program evolves. These conditions involve:

a the provision of a common direction for management;

b determining an acceptable scope for the program and an appropriate rate of implementation. Wider scope programs, taking in more of the organization, have obvious benefits, however, changes in management and information handling require managers to learn how to do new things. Changing managerial style or techniques is a slow process and managers

need to be made aware that progress will not come overnight. Managers can easily feel threatened as a result of any precipate action, so step-by-step progress in a limited program, with full managerial involvement, appears advisable. [4]

c maintaining a combination of pressure for improvement and rewards for results as the program evolves;

d developing the management and information handling improvement program in such a way that there are short as well as long-term payoffs in management effectiveness. Involvement of managers and employees in problem identification and the development of speedy but well conceived solutions to those problems, is a primary means of reward;

e involvement of council in identifying council requirements for information and in providing the administration with consistent direction and updated objectives and priorities (the administration will usually need to play a part by recommending actions and alternatives to council for its revision and approval);

f working with managers in each function and at each management level and with internal and external program advisors to establish an information improvement program which meets managerial needs and which does not make excessive time demands upon managers;

g obtaining ongoing support for the program, particularly from councillors and top administrators but also from managers at all levels involved in the implementation process.

3 Ensuring that managers understand the importance of information

One of the first steps for the director would be the initiation of a management information education program which would be intended:

a to help administrators and councillors to become more aware of the role of information in management and of the amount of valuable information which actually becomes available to managers through effective management processes, as discussed in Part I; and

b to create an improved understanding of methods both of encouraging public receptiveness to information and of obtaining desired information from the public concerning their reactions to potential municipal decisions or programs. Members of the public respond to information which has an impact on them and, when that happens, they are able to provide valuable information to local government officials if questions are phrased in the right way. [5]

4 Creating a feeling of urgency

Even though the need for information handling improvement is recognized, a program is unlikely to be successful unless there is a feeling of urgency for management information improvement and the recognition of potential management benefits from such a program. Senior administrators and councillors need to be convinced first and junior administrators later as the prog-

4 Detail on the establishment of these conditions is contained in Part IV; at this point the emphasis is on the selection of a program director who has the potential to influence the achievement of these conditions as the program is implemented.

5 The Urban Institute, Washington, D.C. has produced a number of excellent publications dealing with this subject, see for example Webb, H., and Hatry, H.P., *Obtaining Citizen Feedback* and Winnie, R.E. and Hatry, H.P., *Measuring the Effectiveness of Local Government Service: Transportation*.

ram develops and evolves. Such a feeling of urgency will exist in crisis situations, or it can be brought about by identifying a number of evident benefits from such a program. Once the director has the support of top managers, they can outline their expectations for lower level management involvement and thus create some sense of urgency at lower levels.

5 Obtaining managerial commitment

Once the director has taken the preceding steps the program should be considered as a high priority and it should be possible to obtain a firm commitment from a number of managers to devote time:

a to personal improvement in information handling;

b to encouraging other managers to get involved; and

c to the corporate development of effective information support systems (common filing and coding systems and clear procedures for communications and interaction between administrators).

An influential program director can mobilize the efforts of committed managers and help to keep them committed through the achievement of results.

6 Carrying out problem identification

The program cannot be effectively designed until problem areas are explored and problem identification has been carried out at the corporate level or the department level, depending upon the scope of the program. It is probably at this point, more than any other, that the assistance of an external consultant, who is seen as a neutral and unbiased advisor, is most important. Managers are being asked to identify weaknesses in their own and in other's management. It is very important that none of the problems identified result in negative evaluations or appraisals of the managers involved and it is also important that the information generated in this problem identification stage is accurate and reasonably inclusive so problem solutions are realistic.

The questions which are probably most effective in problem identification are those which are aimed directly at each individual manager and which ask him to reflect upon factors which influence the effectiveness of his work. 'What is the purpose of your job?' 'What, if anything, is preventing you from doing the most effective and efficient work possible?' 'What additional information do you need in order to make the decisions you should make on the job?' 'What can be done to help you to operate more effectively?' The LGMP experience has indicated that these questions are often better answered in work groups, e.g. the group of people reporting to a particular manager, because things which one person mentions will stimulate the thinking of others.[6]

7 Obtaining an external consultant or advisor

Extremely large municipalities undergoing fairly limited management improvement programs may be able to initiate and carry out the program entirely with in-house expertise. In most cases, however, the LGMP experience indicates that external help is required.

This is not propaganda for external consultants; the LGMP staff are fully aware of the weaknesses of consultants. For that reason it is important that the program is municipally controlled, that the role of the external advisor is clearly defined in advance (preferably by the director in conversation with the advisor), that the individual's area of expertise is appropriate to the service desired, and that 'in-house' expertise is developed to fill most advisory roles.

Given all of the above, an external consultant can play several facilitating roles in any management improvement program.[7]

a He can help in identifying and delineating the problems within the organization.

b He can play a training role in providing internal advisors with facilitator skills so they can help managers to change and improve management styles and techniques.

c He can act as a neutral chairperson at meetings of senior municipal staff, during the formative stages of the new program.

d He can help to resolve conflicts among administrative staff or between administration and council, acting as an integrator at joint council/administrative meetings.

e He can provide ideas for potential program alternatives and methods of implementation.

f He can provide an external viewpoint and perspective on the program, identifying problem areas and providing critical analysis and reassurances when required.

8 Appointing internal managers

One or more highly motivated internal managers can be appointed to act as trainers, preferably on a part-time basis, and an arrangement for the initial training of these managers can be made, unless they are already proficient as management advisors. It is important that the work of such trainers is recognized by senior administrators and that they are rewarded, rather than penalized, for their involvement in what can be a very time consuming role, detracting from their efforts on their regular tasks.

9 Establishing a management training program

A program of initial management training can be established to ensure that managers understand delegation, that they are communicating effectively and that they are aware of the various aspects of a manager's role. There is little benefit, and potentially a good deal of harm, in establishing a brand new systematic approach to management information designed to serve the informational needs of ineffective and/or inefficient managers.

10 Improving the level of trust

Closely related to '8', a comprehensive effort to im-

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6 The process of problem identification is discussed in more detail in *The LGMP Experience: Guidelines for Organizational Change in Local Government.*

7 It is very important that the consultant roles of people with data processing expertise, as opposed to those with management advisory expertise, are clearly delineated, unless the particular consultant has both behavioural and data processing training. Otherwise the two can work together but neither one is advised to attempt to fill both roles.

prove the level of trust within the organization should be made. This is probably best accomplished through effective delegation and communication which includes the involvement of individuals and groups in problem identification and planning and in determining the nature of programs, etc. Such involvement requires the provision of clear direction in the form of purpose, goals and objectives by higher levels of management, and an emphasis upon getting the task done, as opposed to creating an 'impression' of effectiveness which so often seems to be the primary aim.

Union involvement is critical in major programs or in any program in which the upgrading of the management effectiveness of union supervisors is important. Contrary to the seemingly common belief that unions will act as constraining influences upon management improvement, the LGMP staff found union supervisors to be at least as co-operative and improvement oriented as higher levels of management and the unions themselves indicated willing co-operation.

11 Designing the program

When the groundwork has been established for an information handling improvement program the program itself can be developed. Until the previous steps have been carried out, the program cannot be established because the managers' needs for information will change as a result of the steps specified and the process of 'need identification' is an exceptionally important part of the exercise.

Program design should be accomplished by representatives of council (if they are to be involved in the program), senior administrators, external consultants if applicable, and internal data processing and management advisory consultants. An external advisor can be an important source of alternatives in this planning process and can also help in defining priorities and in resolving disagreements between the various planning participants. The scope of the program and its characteristics should be defined after a thorough consideration of the factors described earlier in this part of the paper.

Deciding on the goals and broad objectives of an information improvement program is, of course, the first step. Council and top administrators will have to decide if the program is to be undertaken in one or more departments or throughout the organization, and what it is intended to accomplish.

The original motivations which led to its development will influence what is expected of the program, whether it is to contribute to management skills and resources, remedy or prevent specific problems, or provide the groundwork for introducing new technology. This will also affect the extent of participation in the program. For example, the program may be contemplated as part of an organizationwide management improvement effort, it may result from a new department head's reorganization of his own unit, or it may take place on a smaller scale. Only financial information may be affected if the motivation is to introduce a new accounting system, while a sudden turnover in both council members and senior administrators may call for a comprehensive rethinking of attitudes to information and communication at all management levels.

Some general procedures to be followed in establishing a new program are covered in a previous LGMP publication.[8] A brief summary of the required steps follows.

a Determine the purpose of the program, and whom it is intended to serve (What are its goals and objectives?).

b Determine what measurable benefits will be achieved, and who will benefit. Be realistic about possible attempts to manipulate the program for power or personal reasons, and identify how such efforts can be neutralized.

c Determine the probable costs of the program.

d Identify alternatives which might accomplish the same goals and objectives. What are their relative costs and benefits?

e Identify what form the program will take and who will be required to implement it.

f Identify the objectives of each person responsible for implementation.

g Consider how and when it will be known whether or not the program has been successful in meeting its objectives.

h Determine under what conditions and/or at what time the program will be dropped.

Finally, although it is not actually listed as a sequential step in the establishment of an information handling improvement program, it is strongly recommended that the municipality should move in the direction of a corporate management system. This involves, primarily, the establishment of administrative teams to integrate management initiatives and resources at each management level. The top administrators can act as an advisory team to council, providing the council with alternatives for municipal planning, management and service delivery and helping council to define goals and broad objectives which will, in turn, give the administration a sense of direction and priorities.

Corporate management requires a strong emphasis upon common communication, filing and storage systems which may mean a good deal of time involvement in meetings at the outset. Meetings of all management teams must have well defined purposes, partially, at least, defined by the participants, so the time involved is used effectively. For those higher level managers who object to meetings and discussion with others, the LGMP Team solidly agrees that most meetings are largely a waste of time. That does not mean that meetings and teams are not needed, in fact, the roles of top managers largely consist of obtaining information, making decisions and disseminating information. Face-to-face contact is necessary for all of these. Far too many senior managers are involved with technical details that are better handled by operational managers or employees and neglect the decision making and information handling roles they should play.

Part IV combines more general improvements in management with specific improvements in the area of information handling.

8 *The LGMP Experience: Guidelines for Organizational Change in Local Government,* Paper 11.

Part IV

The Implementation of a Systematic Approach To Information Improvement

In the preceding pages, the relationship between management sophistication and information has been described, the importance of individual networks has been indicated and the steps necessary prior to the implementation of a comprehensive information improvement program have been outlined. While the information improvement needs of various municipalities will differ there are a number of general activities which will probably be required in most cases. These are summarized on the following pages as a series of steps but the most appropriate order will depend upon the needs and financial capability of the implementing municipality.

For any major program of information improvement, the preparatory procedures recommended in Part III are strongly recommended. These lead directly into the following steps which really combine more general improvements in management with specific improvements in the area of information handling.

1 Clearly define the municipal purpose and roles

As already emphasized, a clear definition of the purpose of the municipal corporation and the roles it plays is crucial to effective management. The purpose must be defined and understood by council, with the help and advice of administrators. The LGMP experience indicates that this process usually requires initial definition of purpose and roles by the administrators for submission to council. Council is then able to consider a concrete proposal and can make revisions as they see fit. In many cases, the development of a clear understanding and agreement upon municipal government's purpose and roles may take a number of joint council/administration workshops. Contrary to common opinion these roles have not been clearly defined and are misunderstood in most municipalities. The purpose and potential roles of local government are discussed in some detail in the analysis section of *The LGMP Experience: Phase II,* and in *Corporate Management: Its Role in Local Government.*

2 Determine the corporate goals and broad objectives

The determination of corporate goals and broad objectives (inherently containing priorities) by the municipal council with the advice and help of a top administrative team, is the next step. It is recommended that an initial set of goals and broad objectives should be determined by a committee of department heads and the chief administrator (if applicable), and submitted to council for consideration and discussion during joint council/administrative workshops of at least one and one-half days duration. Following the discussions in that workshop the administrators can revise the original goals

and objectives and resubmit them to council for final discussion, suggested revision, and approval.

3 Assign administrative responsibility

Once council has clearly determined the relative roles to be played in local government by the council and administration and has worked with administrators to clearly define corporate goals and broad objectives,[2] council can reassess and reassign administrative responsibility to administrative departments or make suggestions regarding such reassignment if there is a chief administrative officer. In the LGMP experience, the responsibility of administrative departments, particularly support departments, was often confused and uncertain and co-ordination, internal support and attempts to deal with more general planning and management problems suffered as a result.

4 Determine administrative goals and objectives

When corporate goals and broad objectives have been defined and administrative roles and responsibilities have been clarified, top administrators have the information required to define the purpose and role of the various administrative departments and the corporate responsibility of the overall administration. From the LGMP experience there is a need for an administrative co-ordinator to ensure that support services are operating effectively and that corporate problems involving a number of departments are being effectively handled.

As administrators at top levels define goals and broad objectives, allocate responsibility and indicate the resources available, administrators at lower levels obtain the information they need to establish their relative contribution to high level goals and objectives. To do this systematically, lower level administrators need also to define the purpose, roles, goals and objectives for their own operation and this definition provides information for managers and employees at lower levels. It also gives the administrator a basis against which his management results can be assessed.

5 Develop an inventory of current filing systems, and data processing equipment

At the same time as the management processes are being

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1 While many of the steps discussed here were earlier outlined in Part II, in this case they are more formally described as part of a systematic approach. In Part II an attempt was made to make each step meaningful in terms of action required by an individual manager.

2 Detailed discussions relating to corporate goals and objectives are contained in *The LGMP Experience: Guidelines for Organisational Change in Local Government'* and also in *'Corporate Management: Its Role in Local Government.*

reviewed, 'data processing' and 'administrative system' professionals can begin to review and revise the information support base. This includes:

a taking an inventory of current filing systems, coding systems, data storage and retrieval systems, internal communication systems and data processing equipment within the municipality. In each case some assessment of capacity and the relative effectiveness of the system and/or equipment can be made;

b liaison with area local governments, the province, the regional government (if applicable) and boards and commissions within the municipality to:

  i estimate the data processing resources currently available in the area;

  ii estimate the type and quantity of data currently requiring storage; and

  iii estimate the extent of overlap in information requirements and the potential for joint storage and use of data processing equipment among all the agencies identified above;

c initiation of action toward the development of common filing and coding systems, at least within the municipality and, preferably, within those agencies, mentioned above, that might have mutual requirements for either stored or active information;[3]

d initiation of action toward the use of common data processing equipment and information storage and retrieval systems within the municipality and, potentially, within the area.

6 Determination of information needs

The determination of information needs must take place at several levels. Council as a whole has certain requirements for information from the administration, from the public, from other levels of government and from neighbouring municipalities. From other levels of government council needs ongoing information about potential new legislation and it needs to send information which will influence legislation which is favourable to municipal citizens. From the public, council needs to know citizens' requirements for services, their feelings about potential future developments and their reactions to possible new zoning or control regulations. For planning purposes councils need population, economic, housing, land use and other trend analyses. From the administration they need to know how effectively administrative departments are performing, what is happening to productivity, what developments the administration feels are necessary for the future, and what increases or decreases in costs and sources of revenue will occur in the future.

The preceding paragraph only partially covers council's

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3 This paper does not contain the details of common filing systems, which may be centralized in a central registry system or, we believe, more appropriately, may be decentralized in departmental systems with the main user department retaining files in relevant areas. The main requirement is a relatively simple, common classification system which can be easily used to designate similar codes to the same items by different clerical staff in different locations. Clerical staff should have workshops in filing, retrieval and communication systems, and in operational procedures, at six month intervals.

need for information but there is nothing to be gained in going into greater detail at this point. Special circumstances in each municipality will dictate what is high priority and what is low priority information for a particular council at a particular time. In fact, unless councillors have really attempted to establish the purpose of local government, its roles in the community, and its goals and objectives, they are probably not fully conscious of the decisions they should be making and the information they need to make those decisions.

Council/administrative workshops can help by making both councillors and administrators more aware of their respective roles in local government and of the things they need to know more about to carry out those roles.

In Part II of this paper a good deal of emphasis was placed on the need for individual managers to carry out a process of activity classification to determine how they spend their time, a decision-making analysis to determine what decisions they are making and what decisions they should actually be making, and an information analysis to determine what information they have, what information they are actually using, and what information they 'ideally' should have.

A similar process is necessary for committees, both council and administrative, and for management teams. Essentially, council is a top management team, often one which is operating inefficiently and ineffectively and which, as a result, is encouraging inefficiency and ineffectiveness in the municipal administration.

Since a major thesis of this paper is the contention that guided self examination is an important means of improving management, the method suggested will be reviewed as it might relate to either an individual manager, a project team, a committee, or a management team. The suggested steps and the rationale behind them follows.

a DETERMINING WHAT THE INDIVIDUAL OR COMMITTEE IS DOING NOW

For a manager this is relatively complex. It means that he must keep track of activities, preferably for at least three weeks, gradually developing a meaningful categorization system to classify his activities in terms of purpose or some other criterion. For a committee, of course, a classification of activities would be much easier.

b DETERMINING WHAT DECISIONS ARE BEING MADE

After a manager has kept track of activities for approximately a week, he can begin to examine the decisions he is making. Decisions influence activity, and are difficult to recognize at first, particularly in regard to the actual time at which a decision was made. At first, it is often a case of deciding why and where certain of his activities began. As he begins to identify the decisions he has made, the manager will often begin to understand his activities more fully. For example, if a department head has unconsciously decided that he cannot trust the data he receives from data processing he will no longer read the formal information reports and may begin to pay personal visits to one of his superintendents to set up some type of direct reporting system.

Once again, a committee has a much easier time deciding what decisions have been made. All too frequently, the real question for a commitee is — 'Why weren't some decisions made?'.

c DETERMINING WHAT INFORMATION HAS BEEN USED TO MAKE DECISIONS

This is also very hard for a manager to determine and is sometimes embarassing. Yet it is very important to understand why a particular decision was made and what information was either used or ignored in the process.

Committees have a tendency to act on very little information in some cases, particularly where there is strong initial agreement on certain aims or purposes of the committee. Thus it is highly worthwhile for such a group to determine what information was used and also what information was apparently ignored in making a particular decision.

d EXAMINING THE APPROPRIATENESS OF DECISIONS

For many managers this is a crucial part of the process. In a large proportion of cases, decisions are not delegated to the level at which they must be carried out. Lower level managers lack power as a result and can easily become demotivated by their own lack of potential to influence the behaviour of their staff or employees. Decisions must be appropriate to the assigned responsibility and the delegated authority.

In some cases managers avoid decisions and organizational problems are not alleviated. Municipal government is often regarded as a arena where risk-taking is not encouraged and administrators are hesitant to take initiative and to make decisions. Actions by administrators can become political issues and thus inaction is chosen as the safe alternative.

By means of the preceding steps, which involved an examination of activities, managers will begin to have a clearer picture of their responsibilities (especially if they are also setting objectives for their jobs) and those of superiors, subordinates and peers. They can begin to ask themselves whether or not they are making the appropriate decisions. Often, managers make the decisions, and in effect play roles, which really should belong to someone in a different position in the organization. Situations where decisions are made at the wrong level usually arise from improper delegation, or lack of clarity of responsibility. The process of jointly defining responsibilities with both the senior manager and peers can be very helpful in informing a manager whether he is, in fact, making appropriate decisions. For example, a department head may be spending a good deal of time getting information about the performance of work groups within his department. On examining the importance of that role in relation to the others he must play, the department head may conclude that the time he spends gathering this information could be better spent elsewhere. Working with his subordinates he may discover that they could fill this role more effectively and free him for more appropriate activities.

When managers work together it becomes possible to see a rough decision-making structure emerging as this kind of examination clarifies lines of responsibility, and

exposes confusion. This can enable decision-makers to identify problem areas and to make adjustments where necessary. On a more limited scale, the process can help to clarify which decisions need to be made by individual managers, and which decisions can be deferred or passed on to others. This step can help to improve decision-making on both an organization-wide and an individual basis, in addition to its contribution to the development of a systematic approach to information.

e DETERMINING THE NEED FOR INFORMATION

Once a manager or a committee has determined clearly what decisions he/they should be making it is relatively easy to identify the information needed to make those decisions. It is important, of course, that managers are not bound by the information currently available. The necessary information may be either more or less (probably less) than is available at present, but it is almost certainly different. Managers must be prepared to admit deficiences in the information they have, even though it may involve time and effort to develop improved information. With the help of management advisors, managers will be able to categorize needed information and to determine the most economical and appropriate sources.

Generally, much of the required information is available within the relevant manager's immediate range of contacts. Beyond establishing processes to obtain information from immediate sources the next step is to determine what common needs for information exist.

7 Establish the relationship between different managers' needs for information

As needs for information are made clear, inter-relationships among the needs of different managers can be established. It is these relationships among managers' needs for information that form the foundation for developing a formal system. A pattern of users may develop. For example, it may become clear that certain managers all require the same information at the same time for certain purposes. Thus, although they may differ widely in other needs for information, they share a requirement in terms of type, form, frequency, and so on. It is then possible to design a formal system on the basis of these patterns which will avoid unnecessary duplication and yet be sensitive to individual information needs.

As the shape of information needs becomes clear, it is possible to answer some of the questions that must be asked in the process of designing a formal system, about the form and frequency of information reporting, about how well different methods of supplying information meet managerial needs, and about the relationship of formal and personal systems to one another.

It is at this point that the data processing professionals can begin to design effective formal systems to meet the needs of managers. Where a formal system appears to be impractical or uneconomical, alternative sources can be recommended and worked out with the help of a management advisor.

8 Design the formal system

In establishing formal systems of information, the unfilled information needs of all managers at all levels can be

examined by data processing professionals. Similar needs can be grouped and the most appropriate form of the information determined.

Managers at lower levels may need particular information in detail, e.g. crew performance, attendance statistics, usage rate on particular facilities. Managers at higher levels in the same organization may want only general information, e.g. total division productivity, general percentage use of municipal facilities, general reaction to programs. Financial information must be appropriate to financial responsibility and must provide the manager with guidance for future decisions.

Council generally needs broad scope information indicating the extent to which departmental objectives are being achieved and the degree to which costs were over or under estimated. Councillors also need general information regarding public reactions to services and to council decisions. This broad, general information enables them to assess the performance of their top administrators and to make the general decisions regarding broad municipal objectives that administrators need for guidance.

Systems specialists, given management information such as objectives and production or service delivery forecasts, can provide print-outs which compare objectives with results, and forecasts with final state variables. They can also provide trend information for such factors as productivity, costs, use of facilities, etc. When they are also equipped with accurate descriptions of manager's actual needs for information, it is relatively easy to set up formal systems to meet those needs, and to determine what type of data processing equipment is necessary for ongoing information processing and for storage and retrieval systems.

Conclusions From the LGMP Experience

Briefly, the LGMP experience indicates that some of the most necessary information for local government management could be supplied by the development of effective management processes. Managers at lower levels in an organization need to be clear regarding organizational purpose, goals and objectives, if they are to effectively fill their own roles in contributing to those objectives. In other words, the scope of management information is much greater than is usually recognized. In fact, *unless an organization is effectively managed, efforts to improve information will be of little use.* Thus it is suggested that management improvement must accompany information improvement. Clear procedures for communication and co-ordination among the components of local government represent important information for managers. This is often lacking in local government.

Individuals must become involved in defining what they actually do as managers before they can really understand their own information needs. Until managers are able to specify those needs and determine which ones can be filled by their own immediate contacts, the development of formal information systems will meet with little success.

The LGMP staff recognize the effects of organizational rank, function and technology upon managers' information needs, but the involvement of managers in defining their own needs will take all of these factors into account.

Once data processing professionals are made aware of the information needs of managers that cannot be readily filled within their own personal information networks, they can begin to determine how common those needs are and what type and scope of formal systems will be required. Top managers will generally require consolidated information, whereas lower level managers will require more specific and detailed information.

Council, as the top decision-making body in local government, needs to be involved in any program of information improvement. The confusion in local government management is rooted in an ineffective top level which promotes inefficiency within its own administration in many cases. Until councils clearly establish their purpose, roles and some corporate goals and broad objectives, inefficiency and ineffectiveness will characterize local government.

In addition to a great deal of detail on the above points and the discussion of a step-by-step procedure for information handling improvement in local government, this paper emphasizes the preparations which are necessary for any major initiatives in the information arena. Some conditions must be present before an improvement program is attempted, whereas others can be developed as time goes on. The improvement of information handling in local government is a complex task, but one which is well worth the effort as long as it proceeds hand-in-hand with a management improvement project.

Appendix I
Why Managers Do The Things They Do

With the help of some fairly recent research by such people as Hodgson *et al*,[1] and Mintzberg,[2] a general awareness is developing that managers do not spend a great deal of their time carrying out the traditional management functions of planning, organizing, staffing, co-ordinating, etc. Instead, they become involved in almost innumerable minor activities of limited duration which tend to confuse the observer at first by their seeming irrationality. As various researchers have discovered, however, these seemingly unrelated activities do form patterns and those patterns do make sense and have meaning. In fact, they can be taken as a whole to represent various roles which managers quite consistently play in carrying out their tasks.

The role analysis which is contained in Table I is generally the role analysis advanced by Mintzberg with some slight interpretations by the authors. If you, personally, carry out a role analysis of the things you actually do as a manager, as suggested in the body of the paper, you may find that the roles you decide upon are somewhat different from the ones in the example. Roles are very likely to differ with variations in organizational rank and function, but in general, Mintzberg's categories seem quite satisfactory for an example.

To provide a bit more explanation to accompany the table, an attempt has been made to enlarge upon each of the role designations to some extent, It is impossible, of course, without going into immense detail, to include all aspects of the role descriptions or to include a full discussion of the type of information required or generated as a consequence of those roles. The table does include an attempt, however, to indicate the types of information the manager requires to play the relevant role effectively, the categories of information he actually obtains by playing the role, and the categories of information he generates as a part of the role. Each role will be briefly discussed.

Interpersonal roles

All managers play certain interpersonal roles in which they exert influence on others, to a greater or lesser extent. Those influence roles can be said to include:

1 a figurehead role in which the social expectations of the position are fulfilled. This can, in practice vary greatly, depending upon the manager, from for example, the highly task oriented colourful role of

General George Patton to the co-ordinative, calm reasoning role played by Lester Pearson;

2 a leader role in which the manager exerts influence on his subordinates by providing them with an example, direction for their efforts, etc. The process of communication of that direction is extremely important and may vary from an autocratic expectation of compliance to a democratic, involving type of leadership;

3 a role which involves influence upon other members of the organization through interaction or liaison. Often this role involves trade-offs, mutual support, etc. A manager's mode of influence in this role can run all the way from forceful use of power to a co-operative, co-ordinative approach involving mutual advantages to the individuals.

Informational roles

As indicated in Table I, all of these roles require information and the manager generates information as he plays the role. Investigation of managerial behaviour has consistently indicated, however, that managers also play roles which have the primary purpose of either obtaining or disseminating information. These include:

1 a monitoring or scanning role, in which the manager uses his position, contacts, influence and powers of observation to obtain information from his environment. The degree to which he is seen as open by others and the extent to which he is in contact with them, will influence his ability to play this role;

2 the manager also plays an information disseminating role in getting the information he obtains from other managers or from outside the organization to the members of his unit. His organizational position permits access to information which his subordinates cannot obtain. His own openness and willingness to pass on information is rather crucial in playing this role effectively and the degree to which he is trusted and believed by subordinates will affect the extent of his communication with them;

3 the spokesman role involves communication about the unit to people on the outside who can influence the effectiveness of the unit's operation. In this respect, the manager can play an important role in obtaining outside support and backing where necessary.

Decision-making roles

Whereas the role of a manager was previously seen as primarily one of decision-making, he does play a

1 Hodgson, R.C., Levinson, D.J., and Zeleznik, A., *The Executive Role Constellation*, Boston: Harvard Business School, 1965.
2 Mintzberg, H., 'The Manager's Job: Folklore and Fact.' *Harvard Business Review*, July-Aug. 1975.

number of other roles quite distinct from the actual decisions he makes — as already indicated. The decision-making roles do, however, determine the direction and extent of task accomplishment of the manager's unit, as long as his behaviour in other roles is sufficient to obtain support both inside and outside the organization. Decision-making roles include:

1 the attainment of high quality performance by the people within the unit and decisions which involve the adaptation of the unit to new role requirements or to changes in the environment;

2 a conflict resolving role which requires the provision of a sufficient integrative influence to encourage people to work together and yet to bring out differences and to permit self expression to the extent that the organization retains an innovative capacity;

3 the allocation of scarce resources, to subordinates, to enable them to get the job done;

4 making decisions which entail the extent of co-operation with other units. Decisions in this category involve the development of co-ordinative relationships both inside and outside the organization unit. The development of mutual support operations would fall within this category.

The process of role analysis can be helpful to a manager because it promotes thought about the job and the things he must do in an ongoing way to be an effective manager. As he becomes more conscious of the various things which he does, he is able to improve the effectiveness of his operation in those areas.

Since this paper is primarily concerned with aspects of management related to information handling, some potential information related consequences of the roles outlined have been included in Table 1. The references to information in that table should be self explanatory.

Table 1

MANAGERIAL ROLES AND INFORMATION

Managerial Role	Main Focus of Role	General Categories of Information Required	General Categories of Information Generated	General Categories of Information Obtained
INTERPERSONAL				
a. FIGUREHEAD ROLE	a ceremonial role in which the manager fulfills the social expectations of his position	knowledge of social expectations of the position, organization, etc. and a knowledge of protocol, particularly in higher positions	an opportunity to promote a favourable impression of the organization and to present a desired picture, lobby for causes, etc.	attitude toward his organization in the external environment
b. LEADER ROLE	the direction and improvement of efforts within the organizational unit which the manager controls	performance and needs of individuals; resource requirements; methods of influence	feedback on performance; experience based advice; information gained from the external environment as a consequence of the managers status	through participation - the ideas and input of people within the organization
c. LIAISON ROLE	the manager's contacts and development of relationships outside his vertical chain of command	knowledge of his own operation and clear objectives so he can maximize influence	generates good will, evidence of cooperation, etc.	through good relationships he obtains information regarding objectives and operations of others, reactions to his operation and encourages supportive behaviour; better understanding of his organization and environment
INFORMATIONAL				
d. MONITORING OR SCANNING ROLE	obtaining information from his environment often largely dependent upon his effectiveness in the liaison role	appropriate and reliable sources of information in the environment (must have the respect of people in the environment to enable him to accumulate this information)		as indicated in the liaison role; his effectiveness in obtaining this type of information will depend upon his ability to liaise effectively
e. DISSEMINATOR OF INFORMATION ROLE	passing information to his subordinates which he obtains as a result of his greater managerial scope and status	must have the respect of subordinates to have the necessary impact	passes on information relevant to his employees, obtained in higher level meetings or contacts with peers or outside environment	employee reactions to environmental information

Table 1
MANAGERIAL ROLES AND INFORMATION (Cont'd)

Managerial Role	Main Focus of Role	General Categories of Information Required	General Categories of Information Generated	General Categories of Information Obtained
f. SPOKESMAN ROLE	communicating information which might influence behaviour toward the organization by those outside it	must know the needs of his organization and the people in it and be fully cognizant of his own operation	informing others regarding organizational needs; developing mutual objectives and trade offs; insuring that the objectives of the organization are understood	reactions of those in environment to organizational needs
DECISION-MAKING				
g. ENTREPRENEURIAL ROLE	improving the performance of the organizational unit and adapting it to changes in role or environment	performance information; environmental information, potential changes, etc.; improved operational methods; costs of operation and various alternatives; objectives of the larger organization	objectives of organizational and himself to those within; need for change, type of changes and reassurances regarding individual roles	ideas from people within the organization regarding methods of implementation, problems involved in implementation, etc.
h. DISTURBANCE HANDLING ROLE	the resolution of on-going pressures - circumstances which had not (perhaps could not) be planned for; dealing with crises; sometimes promotions and resolution of internal conflict	implication of the pressure, e.g. collapse of source of supply; alternatives and costs	instruction to staff; requests for aid where required; contacts with new customers, suppliers, etc. (depending upon the nature of the disturbance)	problems with present planning process; information regarding the reason for the crisis or conflict
i. RESOURCE ALLOCATION	allocation of resources to appropriate subordinates	resources available; needs, given new demands plans and structures; objectives for the organizational unit; past performance	allocation of resources to subordinates and the rationale for that allocation	subordinate's feelings regarding ability to cope with allocated resources
j. NEGOTIATION	the process of attaining a team or cooperative operation within the relevant organizational unit and between that organizational unit and others in the immediate environment	needs of various people or groups in the organization; resources available; alternatives; needs of other groups in the environment	methods of cooperation; joint objectives; rewards for various people and groups concerned; composite plans	degree of satisfaction/dissatisfaction of parties concerned; revision of objectives to satisfy competing parties, etc.

51

An Outline of Managerial Activities, Decisions and the Information Used By One Municipal Administrator

For this brief example the administrative position chosen was the division head of a roads division of an engineering department in the City of Modal, 200,000 population. Some of the information recorded during the survey of management activities is indicated first, followed by his assessment of the decisions he made, plus the information used to make those decisions. An analysis of the decisions from the manager's perspective follows and the final part of the process involves the identification of the type of information needed for the future.

MANAGERIAL RESPONSIBILITY

1 The construction and maintenance of roads, streets and sidewalks within the municipality.

2 Contribution to transportation planning for the city, including the need for and location of main traffic arteries, integration of the needs of new developments into existing traffic patterns, and forecasts regarding traffic density, future potential, traffic problems, etc.

3 The maintenance and repair of municipal heavy equipment.

4 The operation of an equipment and transportation pool for the municipality.

MANAGERIAL ACTIVITY

An excerpt of the survey of managerial activities as recorded during one day of a three week period follows:

08:30 - 09:00	Planning day — listed activities necessary.
09:00 - 09:10	Obtained replacement secretary for personal secretary who phoned in ill.
09:10 - 09:30	Examined complaints about allocation of vehicles by motor pool — determined that policies should be revised.
09:30 - 10:00	Revised policies for motor pool operation for consideration by committee of department heads.
10:00 - 10:30	Coffee with superintendent of motor pool. Discussed new rules for operation of pool and the practicality of implementing them. He had some good ideas for obtaining co-operation from other administrators.
10:30 - 11:00	Reviewed mail and instructed replacement secretary regarding who should receive what.
11:00 -11:20	Called superintendent in charge of maintenance regarding Parks' complaint — he said problem was being caused by lack of planning on part of Parks division.
11:20 - 11:30	Called Parks division head with reference to superintendent's explanation. Need to call a meeting to discuss the problem in more detail.
11:30 - 11:45	Reviewed new appraisal procedure and form from Personnel. Suggested that some training in interview processes and procedures would help. Indicated that two of the appraisal categories seemed inappropriate for my purposes.
11:45 - 12:10	Review of regulations and specifications for subdivisions and of plan for Denton subdivision.
12:10 - 01:30	Lunch with department head and the head of the current planning division of the City Planning Department. Discussion centered around transportation requirements of the subdivision and the impact of that subdivision upon traffic patterns in major arteries. Also discussed the relative costs of two variations in the subdivision plan, from the roads and transportation viewpoint. If the township of Delta would agree to the widening of three miles of Blair Road during the next year the best alternative for the subdivision would be more feasible.
01:30 - 02:00	Called the Road's division head of Delta Township regarding the widening of Blair Road. He agreed that it was feasible, but suggested a trade-off, in that Delta Township wanted a better con-

nection with provincial highway No. 409, which had to be built across one-half mile of the City of Modal's land. Seems to be a reasonable trade-off but must be confirmed as feasible with George (department head) and Mike (current planning division head) and then submitted to council for approval.

Time	Activity
02:00 - 02:15	Citizen called (Mr. Blaylock) regarding delay in paving new street in the Larch subdivision. Must telephone contractor.
02:15 - 02:30	Phoned contractor re above street and found that he was on time with the project — latest agreement which Al has (superintendent of new road construction).
02:30 - 02:40	Called Al and asked him to give the citizen the details — (realized that I am missing a meeting with the data processing committee to plan on data processing needs over the next year — Just don't have time!).
02:40 - 03:00	Call from Councillor Reid regarding a blocked storm sewer in Queenston (overload caused by refusal of council to approve a new storm sewer for the Cartwright subdivision which feeds into Queenston storm sewers).
03:00 - 03:30	Talked to Jim (superintendent of maintenance) about storm sewer

problem and short and long range solutions. Jotted down some notes for a recommendation to council for a temporary drainage ditch now and enlargement of Queenston storm sewer next year.

Time	Activity
03:30 - 04:00	Responded to CAO regarding my potential role on transportation planning committee. (Don't really have time for such meetings, but I can't tell him that).
04:00 - 04:15	Memo of complaint to personnel regarding secretarial selection for promotion. My present secretary has the highest possible ranking yet she uses up all her sick leave and more, and shows little initiative.
04:15 - 05:00	Called into data processing meeting because the data processing division needs to know my requirements for storage of roads data and maintenance data. Had to give them a rough estimate — they need a report as soon as possible.
05:00 - 06:30	Tried to determine rough data processing requirements for report to the Data Processing Division.
06:30 - 07:30	Dinner.
07:30 - 09:00	Tried to develop some ideas about a new costing arrangement for users of motor equipment (the pool lost $100,000 last year).

DECISIONS MADE AND INFORMATION USED

Decision	Appropriateness of Decision	Information
Obtain replacement secretary.	Should I be asking for a permanent secretary instead?	Tenth time in six months secretary has been away.
To question Personnel on selection method for promotion.	Am I contributing accurate appraisals — if not is this Personnel's fault?	Secretary came highly recommended — just promoted in fact. Not a high performer even when she is here.
To develop new policies for motor equipment use.	Should be made in conjunction with Pool superintendent and users but is my decision?	Large number of complaints about favouritism that seem to result from lack of clear guidelines.
To call superintendent of maintenance about lawnmower servicing.	Should have referred Parks Division Head directly to superintendent as this is his first complaint.	Parks Division Head called about need for higher priorities for lawnmower servicing.

Decision	Appropriateness of Decision	Information
To suggest need for appraisal training to Personnel.	Satisfactory — my decision.	Tried the present form — found it lacking.
Make request to Road Division Head for Delta Township for permit road improvement program.	Satisfactory — my decision.	The need for a high density access to Denton's subdivision.
Block off Brock Street instead of Main Street for Christmas Parade.	Probably should have left this decision to Dept. head — really best approved by council for future years.	Political issue — citizen complaints about access — downtown businessmen about route.
Will not hire replacement when Superintendent of Vehicle Maintenance retires.	My decision.	Discussed with superintendent of motor pool — he can handle both functions. Cost savings of $23,000.
Informed Head of Parks Department we would have the road finished in Centenial Park by Friday.	Should have at least checked with Road Const. Superintendent — this in his area and he does a good job.	A new Parks Dept. was under political pressure.
Initiate a road needs study.	Need agreement from Road division heads in Bruce, Davis and Awlington Townships.	Priorities on road work are becoming a political issue.
Decided to tell department head about slow delivery on motor equipment parts.	Should I exhaust every avenue to bring pressure on supplier first?	Supt. of Maintenance complained several times in past two months. Complaints came after complaints from other departments about slow servicing. (Need to know — are we ordering soon enough?)
Agreed to complete Roberts Street job next week.	Should I have referred this to Dept. Head — my Roads Supt. will not like this.	Under pressure from mayor. Our plan stated completion next month approved by council.
Filled out appraisal on secretarial staff — gave them all above average.	Perhaps I should have discussed their performance with the applicable superintendents.	Below average assessment means no merit pay. Had a hassle last time I gave a below average appraisal.
Secretary is ill again — will ask Personnel for replacement.	My decision.	Eleven absences in six months. She doesn't react to censure.

Appendix III
Project Publications

The investigations required for the design of this Project have led to some publications and working papers. These publications will be available for purchase on the publication date indicated on the attached order form.

Apart from the *Project Overview Statement*, the various publications have been grouped into four series.

PROJECT OVERVIEW STATEMENT

This paper describes the Project in overview fashion. It contains a statement of the goal and objectives of the Project, a description of the goal and objective setting process, and the documentation and evaluation processes to be used in the study. Price $1.00.

SERIES A PUBLICATIONS: PROJECT DOCUMENTATION AND EVALUATION

The purpose of this series of papers is to describe the experiences of the four Project Municipalies, to analyse those experiences, and to indicate their possible relevance to other municipalities. This series will also include papers outlining the design of the evaluation process, as well as periodic reports on the evaluation of the Project.

1 *The LGMP Experience: Phase 1.* This paper traces the Project from its inception in 1972 through various approval stages ending with the approval of the Project by each of the four participating municipalities. Price $2.00.

2 *The LGMP Experience: Phase II.* This paper traces the Project through its early implementation stages, ending at the termination of the second full year of funding. Price $4.50.

3 *The LGMP Experience: Phase III.* This final publication will include an overall perspective on the LGMP and an evaluation of the total experience. The analysis section, in this case, will be an analysis of the complete project and the paper will end with a section on the broad implications of similar major programs of organizational change for other local government organizations. Price $4.50.

4 *The LGMP Experience: Guidelines for Organizational Change in Local Government.* As they identified requirements for management improvement, the Project Team attempted to meet training needs and developed working papers explaining the procedures they had used. In total, these working papers, which have been edited and included in one publication, provide a framework or guide for various aspects of organizational change in local government. Price $4.50.

SERIES B PUBLICATIONS: TECHNICAL PAPERS

The purpose of this series of papers is to present reasonably concise descriptions of broad areas of municipal management and administration as they relate to various aspects of the Project. These papers, which describe the state of practice and experimentation of the various areas, have been written for elected and appointed local government officials.

1 *Corporate Management: Its Role in Local Government.* This paper defines the process of corporate management in local government and includes a discussion of a method of approaching a more effective corporate operation. Price $3.00

2 *Improving Management Performance: The Role of Productivity and Performance Measurement.* An overview of the field of performance measurement including examples of output measures, fiscal measures, process measures, and methods of program evaluation. Annotated Bibliography. Price $5.00.

3 *Management Improvement: A Manager's Guide to the Theory and Process of Individual and Organizational Change.* This paper describes frameworks for individual and organizational change which seem to be supported by the LGMP experience. Price $3.00.

4 *Improving Management Performance: The Role of Management Information.* This paper discusses the relationship between information and effective management, with particular emphasis upon techniques that individual managers can use to improve their own use of information. Price $3.00.

SERIES C PUBLICATIONS: CASE STUDIES

The purpose of this series is to describe various municipal experiences with programs related to the goal and objective setting process. The case studies are suitable for instructional purposes to focus discussion on the broad areas which the cases represent.

1 *Goals for Dallas 'A'.* The Dallas, Texas experience with broad goal setting, involving extensive public participation. The 'A' case reviews the program from its inception in 1965 to 1972. Price $2.00.

2 *Goals for Dallas 'B'.* The Dallas, Texas experience with broad goal setting, involving extensive public participating. The 'B' case examines the program from 1972 to 1974. Price $2.00.

SERIES D PUBLICATIONS: PERIODIC PAPERS

The purpose of these papers is to describe various aspects of the Project which are felt to be of interest to municipalities contemplating the introduction of a system of goals and objectives.

1 *Developments in the Management of Local Government — A Review and Annotated Bibliography.* This paper was prepared to provide local government managers and elected representatives with a description of current developments in the field of local government. The paper describes ten areas of development in the management of local government and supplies annotated bibliographies of books, articles and reports dealing with these areas. Price $2.00.

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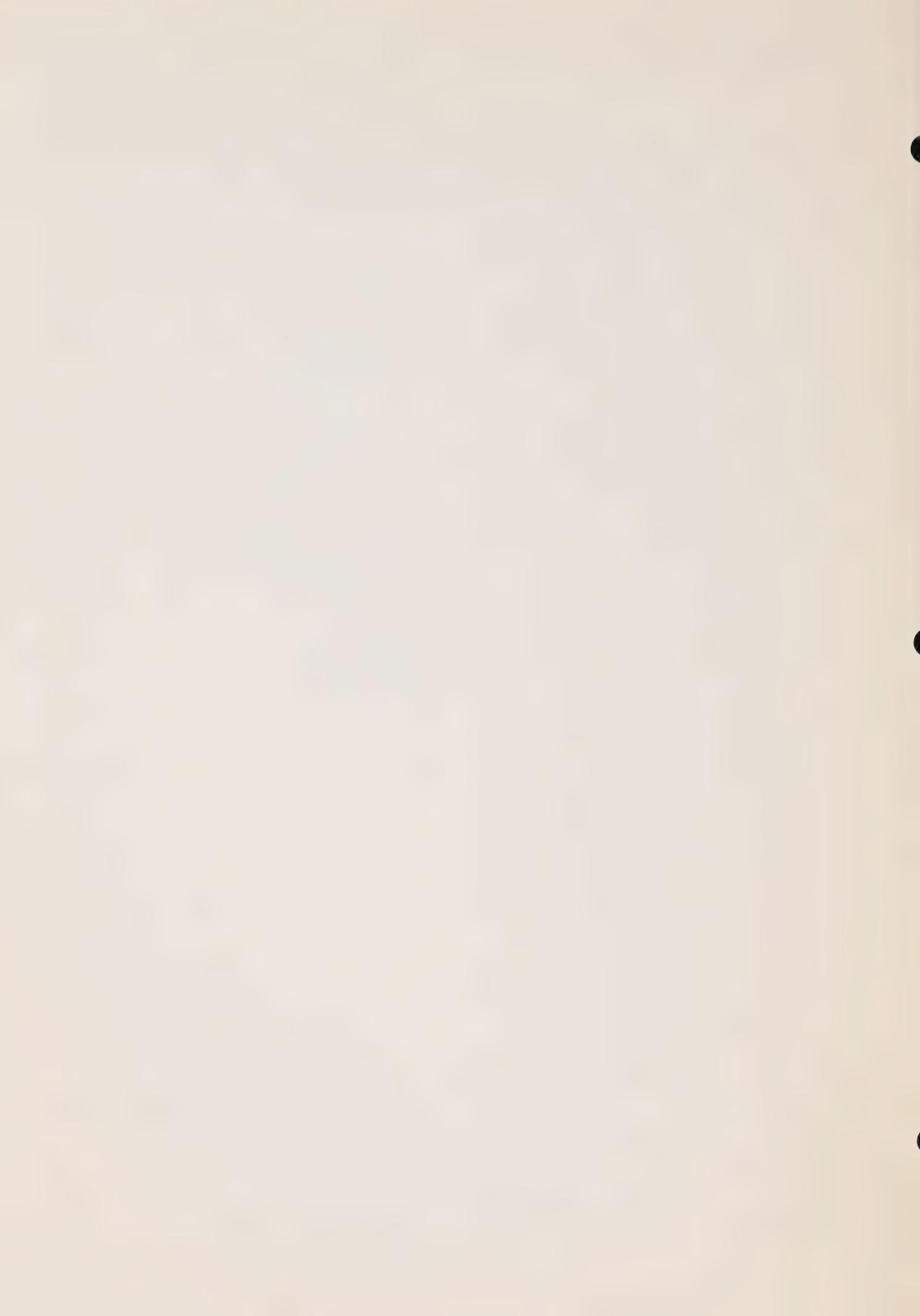
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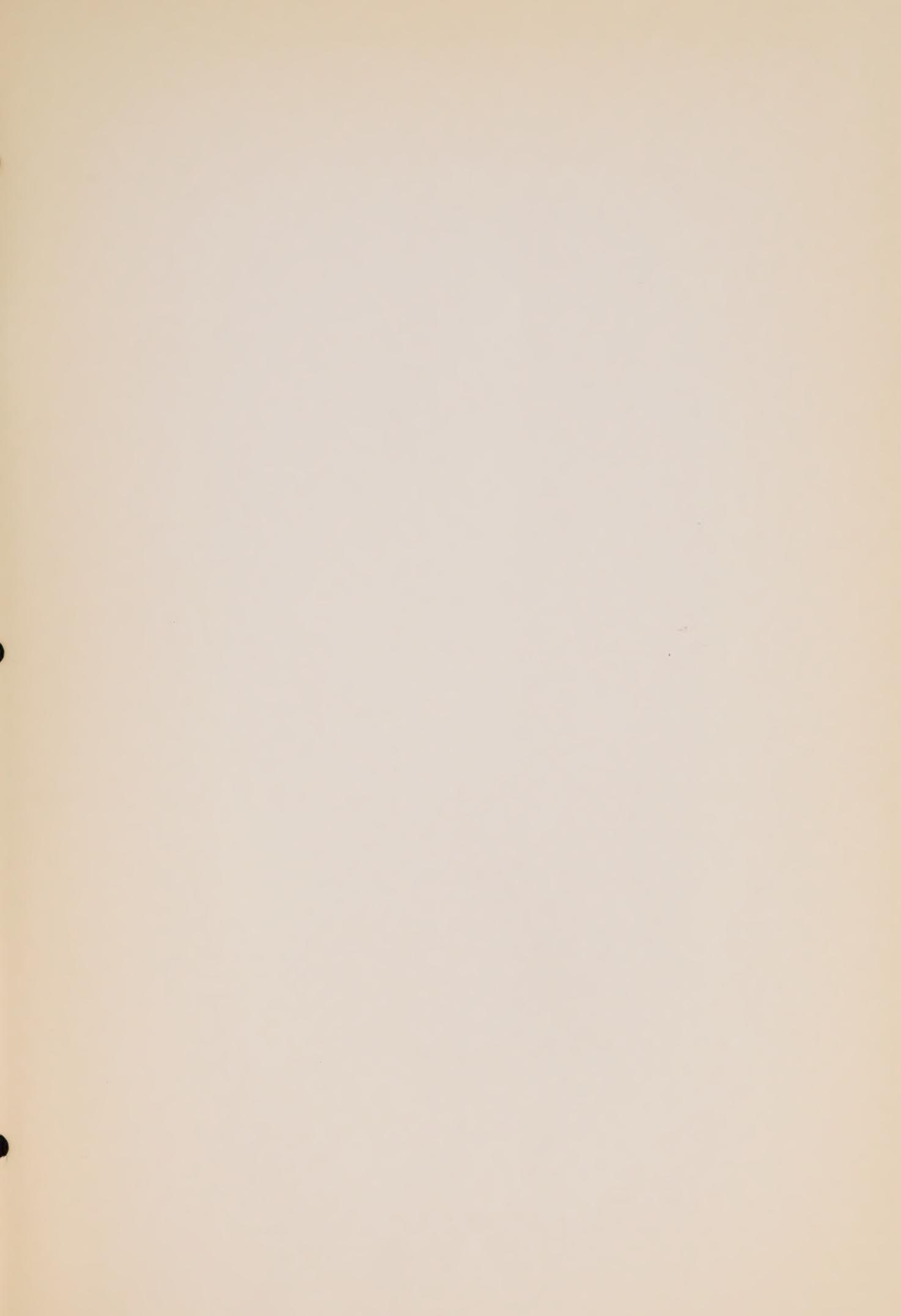
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